Oil, Paint and Drug Reporter.

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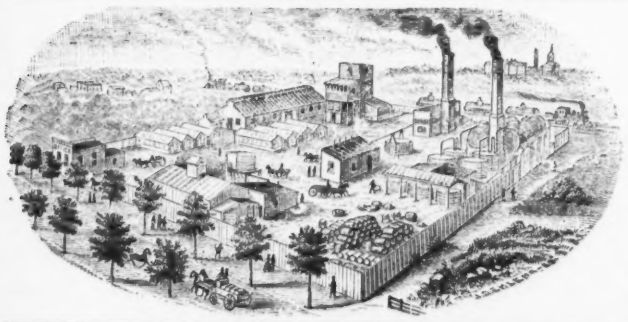

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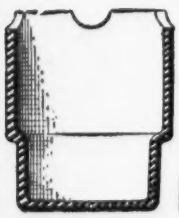

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WEDNESDAY, JAN. 18, 1888.

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COMPARATIVE PRICES.

Following are the prices at this date during the last three years, of leading articles in the lines we report. A comparison with our market reports to-day will be found interesting as showing the present level of values.

	1887	1886	1885
CHEMICALS.			
Bleaching Powder	1 85	1 60	1 70
Caustic soda, 70 p. c.	2 45	2 50	2 60
Caustic soda, 60 p. c.	2 75	2 75	2 80
Sal soda	95	90	1 00
Soda ash 48 p.c. carb	1 25	1 30	1 50
Soda ash 48 p.c. caustic	1 25	1 30	1 35
Soda ash 48-53 p.c. N C	1 15	1 30	1 30
Soda alkali 58 p.c. B M	1 20	1 35	1 35
Soda Nitrate	4 05	2 40	2 20
Brimstone	$20 00	$22 50	$23 00
Cream tartar	34¼	34¼	30½
Muriate of potash	1 70	1 70	1 65
Chlorate of potash	16¼	19½	15½
Kainit	$7 50	$7 30	$7 25
PAINTS.			
White lead in oil	7	6½	5⅝
Litharge	5½	5½	5¼
Paris green	17	15	16½
Orange mineral	7¾	8¼	7½
Ven. red, English	1 40	1 40	1 40
Ven. red, American	1 00	1 00	1 12½
Barytes	16 00	18 00	17 00
Whiting, com'l	37½	37½	37½
DRUGS.			
Opium	$3 20	3 30	$3 90
Morphine (dom)	2 20	2 15	3 20
Quinine, German	55	65	93
Quinine (dom)	53	73	98
Cinchonidia (dom)	8	11	33
Alcohol	2 17	2 13	2 17
Borax, City	6½	7¾	9
Beans, tonka (Ang)	1 30	1 60	1 20
Cubebs	1 50	65	45
Cuttlefish	12	13½	15¼
Glycerine (Am)	19½	15½	18
Oil, castor (City) cs	17	17	17
Oil, codliver, Nor	30 00	30 00	50 00
Quicksilver	53	42½	47½
Oil, bergamot	1 40	1 60	1 50
Oil, cassia	60	80	85
Oil, cubebs	11 00	8 00	4 50
Oil, lemon	1 15	1 75	85
Oil, peppermint (tins)	2 75	3 75	3 75
Oil, sassafras	37	39	43
Aloes, cape	5¾	7	10
Asafœtida	8½	11½	16
Gum arabic, 1st picked	92½	75	38½
Gum arabic, sorts	57½	40	24
Camphor (bbls)	22	23	16
Shellac, D C	18	20	22
Senna, Alex Nat'l	30	15	11
Gentian root	4½	4¼	5½
Ipecac	1 05	82½	75
Canaryseed, Smyrna	3½	2⅞	2¾
Caraway seed, Dutch	8½	10⅞	8½
Coriander, English	4½	5⅝	7
Hempseed	2¾	3	3½
Mustardseed, Cal. yel	3¾	5½	5
Mustards'd, Trieste, br	5½	5½	5
Rapeseed, English	3⅝	3½	4¼
Rapeseed, German	3	3¼	3¾
OILS			
Linseed, (dom)	44	44	51
Cottonseed, prime S Y.	39½	32	39½
Olive, Sicily	74	79	85
Palm, prime	5½	6	6¼
Cocoanut, Ceylon	6¼	5⅝	6⅝
Lard, prime city	53	51½	59
Menhaden, prime crude	23	27	27
Whale, bleached winter	38½	42½	62
Sperm, bleached winter	76	98	1 00
Paraffine, 25 gravity	8½	10½	11
Neutral, 34 gr. b'less	16	15	18
Black, 29 gr. 15 deg	7½	9	9
Cylinder, 600 deg	15	18	20
Oil cake, western	25 00	26 50	29 75
Spirits turpentine	39½	41	30½
DYESTUFFS.			
Cochineal, Teneriffe S.	30	32	32
Cutch	7½	6¾	6
Gambier	4⅞	5	5
Indigo, Bengal h grade	1 25	1 50	1 50
Bichromate potash	9½	9⅞	10½
Prussiate potash, yel	18½	21	22½
Sumac, Sicily prime	72 00	82 50	100 00
Starch, West'n corn bls	2⅝	2¾	2¾

WEEKLY REVIEW.

The steady increase in the supply of loanable funds, and the lack of speculation still continue to induce an easier money market, and the rate for call loans is 3½@4 per cent., while money on time can be had at 5@6 per cent. Currency continues to flow toward New York from the interior, the rates of exchange tending to induce large shipments. At the same time there is a good demand at the West, with business brisk and collections prompt. Commercial paper is in good supply with an improved demand. We quote 60 to 90 days' indorsed bills receivable at 5½ per cent; first class four months' commission house names at 5½@6, and good single names—jobbers—having four to six months to run, 6@7. The following are the rates of exchange on New York: Savannah, buying par, selling ⅛@¼ premium Charleston, buying par, selling ⅛ premium. New Orleans commercial, par; bank, par. St Louis, 90c per $1,000 premium. Chicago, 50 per $1,000 premium. Sterling exchange is heavy.

Sterling, 60 days, nominal	$4 84½@4 85	
Sight, nominal	4 87 @4 87½	
60 days, actual	4 83½@4 84½	
Sight, actual	4 86 @4 86½	
Cable Transfers	4 86½@4 87	
Commercial 60 days	4 82¾@4 83¼	
Paris, 60 days	5 22½@5 21¾	
Sight	5 20 @5 19⅜	
com, 60 days	5 24⅝@5 23¾	
com, sight	5 21⅞@5 21¼	
Antwerp, 60 days	5 25 @5 24⅜	
Swi. 60 days	5 22½@5 21⅞	
Sight	5 20 @5 12⅜	
Reic marks (4) 60 days	95⅞@96¼	
(4) sight	96⅛@96⅜	
(4) com 60 days	94¾@94⅞	
(4) com, sight	95⅛@96¼	
Guilders, 60 days	40 3-16@40¼	
Sight	40⅝@40 7-16	
com 60 days	40 @40 1-16	
com sight	40 3-16@40¼	
Copenhagen, Stockholm and Christiana, krons, 60 days	26¼@26 11-16	
sight	26¼@26 15-16	

SUMMARY.

The December petroleum statistics as also the statistics of exports for the same month, are considered and their more interesting features pointed out and interesting comparisons made, which show the situation to be somewhat more bullish than had been anticipated, although the reduction in stocks has not proved so large as was expected. The possibility of changes in the tariff during the present session of Congress, which may adversely affect the interest of Lead Producers and Corroders, viewed from their standpoint, has resulted in active measures being taken to prevent as far as possible the occurrence of such a contingency; the metal men are preparing a vigorous protest against any reduction of the duty on lead in the ore or pig, while the corroders have contented themselves with the appointment of a committee to go to Washington to look after their interests, and prevent if possible any action that will deprive the white lead manufacturers of the one cent per pound protection represented by the difference at present existing between the duty on the metal and that levied on its product. The Lead Trust is about to establish a large works at Franklin, Pa., for the purpose of manufacturing red lead, litharge and orange mineral; this is believed to be the beginning of a policy on the part of the Trust which may result in centralizing the manufacturing of the brands of white lead represented by its stock holders. The proposed Lard legislation is treated at some length and arguments are advanced to show the weak points of the Dawes bill now before Congress. A series of trade subjects will be discussed in Washington to-day, presumably for the benefit of National law makers. Oleomargarine production and consumption are said to be increasing, notwithstanding the restrictions placed on the industry by the laws now in force.

Merchants are advised of a sample exhibition in Buenos Ayres. The cork forests of Tunis are referred to. A writer attempts to demonstrate that waste oils can be used for illuminating purposes. A method of preparing dragon's blood is described. The series of articles on the manufacture of fuchsine is continued. Some new uses for gas tar are given. Disinfectant candles are a new article of commerce abroad. Recent changes in the customs tariff of foreign countries are announced. The Syrian sponge fisheries are commented upon by a firm identified with the business. The window glass trade is reviewed for 1887. The explosive character of picric acid is described. Spurious mace is spoken of. The Druggists' Mutual Fire Insurance Co. have elected directors and an executive committee for the year, and reports of business thus far are very encouraging. Considerable loss by fire has been sustained by two proprietary medicine firms in Warren street. Natural gas is the subject of an article by Prof. David Swing. A correspondent states how Mexican lead comes to this country. December statistics on petroleum furnish food for thought, and no doubt will be carefully studied by the operators. The failure of Wm. F. Kidder & Co. rather surprised the trade. The opium market for 1887 is reviewed. An examination of croton and codliver oils gives some important results.

THE PROPOSITION TO TAX LARD REFINERS.

The bill taxing the manufacture of refined, or compounded lard, which was introduced by Senator Dawes and is now pending in Congress, is of more serious import than might be inferred from its title. The bill is, in fact, an exact copy of the oleomargarine law adopted by the first session of the Forty-ninth Congress, excepting that the word "Lard" is substituted for "Oleomargarine" wherever the latter occurred in the original. The principle of right involved in the spirit of these measures is too wide to be treated in the restricted limits of a bill devoted to the protection of a single article, even of so much importance in domestic economy as lard or butter; and the principle of wrong involved in the letter of these laws is too serious to be tolerated even when it affects but a single commodity. If the protection of our citizens against the sophistication of food, medicine, or clothing, is to be undertaken at all, the initiative should not take the form of such narrowly discriminative class legislation as characterizes the existing oleomargarine law, and the Dawes bill for the protection of lard. In introducing the bill which bears his name, the senator from Massachusetts stated that it was done by request, thus disclaiming its authorship, or responsibility for its provisions. To assume that its language was his, or that he was willing to lend unqualified indorsement to the act after a careful study of the subject to which it related, would be incompatible with the distinguished senator's reputation for statesmanship and clear-headed intelligence. The introduction of the bill was merely the courteous discharge of one of the functions of a legislator, namely, the proposal of measures demanded by a constituent or by constituents. In the present instance, the constituency is narrowed down to a Boston pork packer, whose motive is wholly selfish, and whose object is thoroughly monopolistic. Nevertheless, the senator cannot with propriety refuse to present his case for hearing in Congress, though doubtless he is not in sympathy with the class of legislation to which it belongs. The primary and most glaring defect of the oleomargarine law and the Dawes bill, is that each deals with a single article when there are hundreds of other commodities equally or more in need of the only form of enactment to which these should be amenable. The next defect, and one indefensible on any ground except that of an emergent necessity for revenues, which happily does not harass the government at the present time, is the proposition to tax out of existence an industry that cannot be legally prohibited for the reason that it is in no sense illegitimate. The only defensible feature of the Dawes bill, is the provision that all compounds of lard shall be sold as compounds and shall not be sold or offered as "pure lard," by which is meant only the "unmixed fresh fat of slaughtered swine." This single provision coutains all that the law should say except, perhaps, the general proviso that it shall be unlawful to mix with lard any ingredient dangerous to life or health, and even the common law will protect the citizen in this regard. There is no constitutional warrant, nor any warrant in justice or common sense, for the enactment of a law which shall prohibit, or tax, or in any way discriminate against the manufacture of a substitute for butter, provided it is not intrinsically unwholesome, or a substitute for lard, provided it is no more harmful to the human system than "the fresh fat of slaughtered swine." As well might congress say that linen is the proper fabric for a pocket handkerchief, and that cotton handkerchiefs shall be taxed because they are cheaper. Cotton should not be sold for linen, nor linen for cotton, but the man who prefers the economy of a cotton, or a mixed cotton and linen handkerchief, has an inalienable right to use whichever fabric best suits him. Hosiery, dress goods, and suitings, are every day made and sold in the district of the distinguished senator from Massachusetts, which are represented to be all

wool, and which bear no statement even that they are mixed with cotton, though they contain more than fifty per centum of the last named staple. Without this admixture of the cheaper ingredient these goods could not be sold to a large class of consumers which is now comfortably and cheaply clothed by the adulteration, of which, however, congress might with propriety demand that there should be some other evidence than the mere low price at which the goods are sold. The manufacturers of oleomargarine or of compound lard can bring no good argument against the proper designation of their product, except only that they are singled out of hundreds of substitutes and compounds which, if the principle of preventing misrepresentation were to be uniformly applied, would also have to bear an explanatory label. We believe that in the long run compounded lard will be preferred to the pure hog fat, for the very good reason that the ingredients used for compounding, whether to impart firmness to lard prepared for shipment to warm climates, or for the purpose of cheapening the product, are in no case inferior to lard. The stearine which is used to give body to lard and raise its melting point, is as harmless as the lard itself, though deficient in oil. Its use, however, is one of those "commercial necessities" which the British Pure Food Law recognizes and sanctions. The cottonseed oil used as the chief ingredient in compounded lard, is in every respect superior to hog fat, being cleanly, wholesome, and cheap, and its use unadulterated with lard is growing daily among people of discriminating tastes and due regard for the healthfulness of their diet. Beef suet, which affords an oil that is also mixed with lard, is as much more wholesome than the hog fat, as beef is admitted to be superior to pork as an article of diet. The operations of the oleomargarine law have failed to discover any instances of the use of deleterious substances in the manufacture of that substitute for butter, and this fact being assured, why should any citizen be debarred by a tax from enjoying the economy of a substitute for rancid butter, because it happens to come from the fat of kine instead of from the udder. What is required of legislation is not to discourage the preparation of cheap but wholesome articles of food, but to prevent misrepresentation in their sale. To this end there is need in this country for such an intelligent law as the British Pure Food and Drug Law, but it should be a comprehensive act, and should supplant dangerous class legislation of the type of the Oleomargarine and Dawes bills. If this type of legislation is not promptly throttled, there is not an industry in the country that does not stand in danger of special taxation at the instance of the farmers, or of some other constituency sufficiently numerous or powerful to command the vote of a demagogic Legislature.

THE TARIFF ON LEAD AND ITS PRODUCTS.

Since it is the general expectation that a tariff bill will be introduced in Congress within the next week or ten days, the manufacturers of the various products of lead, as well as the producers of the metal, are getting ready to protect their interests against any revision of duties which will not accord them the same degree of protection they now enjoy, and which, the majority of them hold, is necessary to the continued prosperity of the industries involved. The Western men, we are informed, are preparing a vigorous argument against a reduction of the duty on lead ore and pig lead. They are quite confident, however, that no action touching their interests will be taken by Congress at this session, though upon what grounds this belief is based does not appear. From other sources, not so intimately connected with the production of the metal, but equally interested, we learn that if a general tariff measure is brought up lead will receive its share of attention. The probability is that neither the producers nor the manufacturers who use lead in their processes, know with any degree of certainty what action, if any, will be taken affecting their respective industries. The metal men apparently rest secure in their expressed ability to show that a reduction of the tariff on lead involves a restriction, amounting possibly to prohibition, of not only the production of that metal, but of silver and gold as well. As affecting the material welfare of the country at large, this, the producers feel, would have great weight with the tariff revisers.

Among those whose interest in a revision of the tariff is very great are the corroders of lead, and from the preparations they have made to guard that interest against a possibly detrimental readjustment of duties, it would appear that they expect the proposition made by one of their number, to which extended reference was made in a former issue of the REPORTER, to have the effect of directing special attention to lead when the tariff is under discussion in Congress. In fact, if we are rightly informed, several measures have already been prepared which comprehend radical changes in the duty on lead and its products. The corroders, as pointed out in the article above alluded to, are not adverse to a reduction of duties, but take the ground that if such a reduction is made the present difference of one cent per pound between the duty on white lead and that on the pig lead must be preserved or the white lead industry in this country will not be able to meet foreign competition. The corroders would, they say, submit to the reduction of the duty on white lead to one cent per pound if pig lead were placed on the free list, but anything short of the one cent margin would amount to absolute ruin to their industry.

At a meeting of the corroders last Thusday, at which there was a large representation of the corroding interests, particularly from the East, the possibility of a revision of the tariff being attempted at the present session of Congress was the principal, if not the only subject of discussion. The meeting as usual with the corroders was a private affair, and but little time was taken in preparing for it, but its work was promptly taken in hand and speedily accomplished, the result being the appointment of a committee to look after the interests of all the corroders, when the question of revising the tariff on lead comes before the ways and means committee of the House of Representatives at Washington. This corroders' committee will endeavor to prevent any tariff legislation which does not contemplate a duty on white lead which is at least one cent per pound higher than any duty which may be fixed on the pig metal, and be in readiness to start for Washington whenever their services there may seem to be required.

THE DECEMBER PETROLEUM STATISTICS.

The statements of the several pipe lines showing the runs and deliveries during the month of December, and the stocks held in tanks and pipes by the several lines on the last day of the month, have been made public. In a general way it has been known that the reports would show a decrease in stocks, but the actual figures have proved disappointing to some of the speculative operators, who had confidently expected a larger decrease, having based their calculations on the differences shown by the daily reports of runs and deliveries. The total stocks held by all the pipe lines at the end of last month was 28,357,112 barrels, which makes the decrease for the month of December 1,298,376 barrels. The decrease during the past year amounts to 5,010,786 barrels. The stocks have been steadily declining since last July, the past two months, however, showing a greatly accelerated decrease, due, of course, to the restricted production. At this rate of decrease the present stocks would become exhausted at the end of about five years, or at the rate of decrease during December, the surplus would become exhausted during 1890. Were it at all probable that the rate of decrease would continue the same as during last month the situation would be ominous, or should the decrease during the next two years show a total as great as the last, the end of the petroleum producing industry, so far as the States of New York and Pennsylvania are concerned, would then be in sight. A change, however, may be confidently expected, if not before the end of the shut-down agreement, certainly soon after the close of the period agreed upon by the producers. The runs during the month of December amounted to 1,299,458 barrels, an increase of 92,198 barrels over the runs of November. This proved an unsatisfactory showing to the producers and the bull operators, they having counted on a decrease. The increase is largely due to the production in the Saxonburg field, which was a new and unlooked for factor, though latterly this field has become insignificant, the total production having decreased to less than 800 barrels per day. The deliveries during December amounted to 2,640,839 barrels and exceeded those of any month of which we have a record excepting October, 1886, when they reached 2,712,364 barrels. The increase over November amounted to 120,094 barrels. This increase may be accounted for by a large increase in the home consumption of all the products of petroleum, our foreign trade showing a falling off. During the years 1885 and 1886 fully three-fifths of the oil was exported, but during the past year the proportion sent abroad has been somewhat smaller, though it still amounted to more than one-half of the total deliveries.

The official statistics of exports for December and for the year 1887, compiled by the Bureau of Statistics at Washington, are also to hand. Our exports of refined oil for the month amounted to 35,633,445 gallons, which is an increase of 66,033 gallons over the amount exported during December, 1886. The exports during the entire year amounted to 464,144,803 gallons which is a decrease of 9,140,326 gallons from the amount exported during 1886. Our exports of crude petroleum during December amounted to 11,611,132 gallons, an increase of 5,307,477 gallons as compared with the exports during the corresponding month of the previous year. The total exports of crude for 1887 amounted to 80,643,839 gallons and shows an increase over those of the previous year of 4,306,079 gallons. Taking the total exports of crude and all the products, the amount during December reached 49,891,451 gallons, which is an increase of 5,505,402 gallons over the exports during December, 1886. The total for last year amounts to 580,463,229 gallons, which is an increase of 789,743 gallons over the exports of the previous year. Of the exports of 1887 as compared with 1886, refined oil and naphthas show a decrease, while crude, lubricating oils and residuum show an increase. Taking the total exports, the difference of 789,743 gallons—equal to about 18,800 barrels—amounts to very little, but the decrease in the exports of illuminating oil is an unsatisfactory showing, as the increase in exports should have been as large as has been the increase in home consumption. It is plain that we have not been able to hold our own in the foreign markets, and that the competition from Russia is becoming formidable.

THE OLEOMARGARINE INDUSTRY EXPANDING.

Indisputable evidence is furnished by the Internal Revenue Bureau that the production of oleomargarine is increasing to meet a larger demand. Reports of collections for December show a very pronounced increase over the production of the corresponding month last year, and the information gathered by collectors indicates a steady expansion of the industry and a widely distributed consumption. It is believed by the tax gatherers that the trade in this article is probably greater than it would have been, had the law not been passed, as the federal supervision accompanied by the guarantee that the product is healthful, has made it popular among certain classes of people, and prejudice in other quarters is fast disappearing. Very little difficulty is encountered in enforcing the law, as the provisions are generally well observed.

Such arguments are necessary to maintain the Internal Revenue Bureau system, and while it is encouraging to know that the onerous tax is not working injury to the oleomargarine business, the industry and the general public could get along much better without it.

THE LEAD TRUST TO ESTABLISH A MANUFACTURING PLANT.

It has been stated, on what appears to be good authority, that the Lead Trust, of which there has been so much talk and so little in the way of practical results, is about to branch out as a large manufactnrer, under the guise of the "American Oxide Company." At present the plan is to confine itself to the manufacture of red lead, litharge and orange mineral, but this is possibly only the small end of the wedge, for if the Trust finds it more economical and judicious in other ways, to produce its oxides at one place, it may arrive at the same conclusion with regard to the carbonate, or at least conclude to gather its scattered forces at a few convenient places, with one central point at which the bulk of its white lead may be manufactured. The place upon which the Trust has decided for the location of its oxide works is Franklin, Pa., which combines the advantages of good shipping facilities with an abundant supply of natural gas for fuel. Half a million dollars will be devoted to capitalizing the oxide company, part of which is subscribed by citizens of Franklin, who are interested in the enterprise. Possibly one of the chief reasons why this place was selected as a desirable one for the location of a factory of this character is, that it is the center of a considerable extent of country holding a large number of consumers of lead products, among the most important of these consumers being the oil refineries.

A COMPARISON OF PRICES.

Below will be found a comparative statement of values in certain articles, to show what improvement if any has been made within the past year. As will be seen, the most important advance has been made by linseed oil, the market being fourteen cents per gallon higher than this time last year; the change has been gradual and as there is every indication of the higher prices being maintained, manufacturers of other articles who use linseed oil have been compelled to make a new schedule of values for their goods

Linseed oil, therefore, has caused a material change in the market for a long list of manufactured products.

The cotton oil market has fluctuated considerably during the year, but present prices are only three cents per gallon higher for crude, and one and a half cents for summer yellow, than at this period twelve months ago. The market for cocoanut oil has favored buyers for some time as compared with last year, and a recovery to future values seems doubtful, although the tallow market is giving assistance in that direction. The lower prices for olive oil are stationary and will likely remain so unless influenced by the present crop. Lard oil has made rapid strides since the opening of winter, in sympathy with the lard market, and is still ten cents per gallon higher than at this date last year. Sperm oil is ten cents lower than twelve months ago, and although a disposition exists among holders to advance their views, there is sufficient stock in New Bedford to supply domestic wants until stock arrives from the Pacific coast. Whalebone is selling at lower figures because supplies are larger and speculation is not a prominent feature of the market. Oleo oil fluctuations are generally confined to fractions, but latterly free buying from Holland caused a material advance here, and a reaction has brought prices to near the point reached at this date last year. Cod oil has been comparatively neglected, and values are about nominal. Holders of menhaden oil are realizing one cent per gallon more than formerly, but they are far from being satisfied with the result. Paraffine oils have also gone up one cent, with probability that slightly higher prices will prevail; this may be said of all the prime lubricating oils, as they will naturally sympathize with a steady advance in crude oil. Paraffine wax is not any higher, although it is probably in a better position than one year ago. Very little can be said about oil cake, as values here are ruled by European markets, and fluctuations are frequent; crushers are not realizing so much money, and that is one argument for better prices on linseed oil. Spermaceti has ruled quiet or rather the speculative buyers in Germany have been inactive, but they may come to the front again when prices have reached their point for operating on an extensive scale. Turpentine is higher and promises to do better.

The following list furnishes some encouragement from the fact that of the twenty articles specified, half of them show an increase for this year:—

	Jan. 15, 1887.	Jan. 15, 1888
Linseed oil (city)	41 @42	55 @56
Crude cotton oil (prime)	33 @34	36 @37
Summer yellow cotton oil	39½@40	41 @42
Ceylon cocoanut oil	6¼@ 6¾	5½@—
Olive oil	74 @75	67 @73
Lard oil (city)	53 @54	63 @64
Crude sperm oil	73 @74	63 @65
Crude whale oil	30 @35	No stock.
Whalebone	$3 00	$2 25
Oleo oil (prime)	10 @11½	11 @11½
Cod oil	33 @34	28 @30
Menhaden oil	22 @—	23 @24
Paraffine oil (25 grav.)	8½@ 8¾	9½@10
Oil cake (western)	$25 00 @$25 50	$24 @$24 50
Crude paraffine wax (prime)	4½@—	4½@ 5
Tallow	4¼@—	4¾@—
Spermaceti	41 @—	36 @37
Spirits turpentine	39½@39¾	42 @—
Cutch (diamond S. M.)	7¾@ 8	7¼@ 7¾
Gambier	5 @5¼	1⅝@ 1⅞

DISCUSSING TRADE SUBJECTS.

There are no less than forty subjects to be discussed by the National Board of Trade at the convention in Washington to-day. The lard question, of course, will be debated by gentlemen who are not identified with the business, and who are not acquainted with the manufacture of this staple product; as a guide, however, they intend to take up the recommendation of the Chicago Board of Trade to the effect that a law be enacted providing that all packages containing compound lard e plainly labeled to avoid deception.

The Board will doubtless reaffirm its previous action regarding the necessity of a judicious national anti-adulteration law. Congress will also be asked to abolish the internal revenue tax upon alcohol used in the arts and manufactures—a request that has been made several times by the National Wholesale Druggists' Association. Commercial credits will be considered with a view of abandoning the policy and abolishing the system, but this is a matter which concerns so many business men with different opinions that little progress can be expected from this suggestion. The old controversy over a tariff revision will be revived and debate centered on a resolution recommending an immediate revision to a revenue basis, in order to promote commerce at home and abroad, and that every industry and every section of the country may enjoy perfect equality under the law.

It is presumed that the members of the National Board of Trade who are in attendance at the convention, have provided themselves with sufficient ammunition to make an impression upon the national law-makers, but there is danger that hobbies may be ridden to death in the congressional atmosphere, and that popular favor may react against necessary legislation because of the persistent advocacy of associated schemes.

Members of the Board of Trade are not slow in making recommendations, and their long speeches look well in print, but having no practical experience to support the arguments advanced, their opinions are accepted by the public as the production of theorists, and as such have no influence in directing public matters or legislation. If the gentlemen would discuss topics pertaining to their every day business, then their views would have some weight, but foreign subjects are generally selected.

TRADE ITEMS.

Mr. Andrew M. Sherrill has been admitted a partner in the firm of Welch, Holme & Clark.

Mr. C. P. Beckwith the popular broker in lubricating oils at 130 Maiden Lane, has our thanks for a neat and artistic calendar.

Mr. J. Fitzpatrick, of the glass firm of J. Fitzpatrick & Co., has been elected a director in the Board of Trade and Transportation.

Dr. Hostetter of bitters fame is still lingering between life and death at his home in Allegheny, Pa. He is suffering from Bright's disease.

Hon. Darwin R. James and Mr. John F. Henry have been appointed delegates to the National Pure Food Convention by the New York Board of Trade and Transportation.

The Illinois Glass Co., of St. Louis, have presented their patrons with an elegant chromo illustrating their large works in Alton, Ills. In the right hand lower corner is a calendar mounted on a vase.

Notice is given that the interest of Mr. W. Barclay Parsons in the firm of Parsons & Petit ceased on the day of his death, and that the surviving partners will conduct business as heretore under the same firm name.

Mr. Chas. E. Bristol, a dealer in drugs, paints and oils in Ansonia, Conn., has formed the Bristol Drug Company, and taken as partners Messrs. E. S. Schoonmaker and E. T. Vance, who were in his employ for eight years.

Senator Quay of Pennsylvania has taken early occasion to go in pursuit of the menhaden fishermen along the Atlantic coast by introducing a bill similar to that which was presented by Senator Sewell, of New Jersey, in the last Congress.

"What else to do and how to do it," is the title of an attractive pamphlet issued by Messrs. John L. Whiting & Son, the brush manufacturers of Boston. The information and illustrations which it contains are intended for those knights of the brush who paint, varnish or calcimine.

Mr. Alden S. Swan, of the oil firm of Swan & Finch, is now a member of the Brooklyn Mayor's cabinet, having been appointed chief of the tax collecting department. He is president of the First Ward Democratic Association, treasurer of the Bridge Trustees, and a leading member of the Brooklyn Club.

The McCowan Company, wall paper makers at Newark, N. J., has been placed in the hands of a receiver, Thomas M. Moore. The cause of this trouble is the lack of quick assets. Liabilities about $25,000, of which $14,000 is now due; nominal assets about $40,000, of which $18,000 is in accounts, $9,000 merchandise, and machinery $9,000.

The Louisville Asphalt Varnish Co., and the Falls City Varnish Co., have been consolidated and the business of both concerns will be conducted hereafter under the name of Collins Varnish Company, of Louisville, Ky. There is no change in ownership, management or varnish formulas and trade marks of the two concerns will be protected as usual.

According to a report from Pittsburg, the establishment of a workers' co-operative flint glass factory at East Liverpool, O., has so far proceeded that the works are being stocked with sand and the necessary materials by the workers preparatory to resuming operations. It is said that fully thirty men from Pittsburg will go to East Liverpool to work, during the strike.

Messrs. Procter & Gamble of Cincinnati, the well known soap manufacturers, will have charge of the business of the American Glycerine Co., hereafter, the latter concern having been transferred to Procter & Gamble. The works are now complete and with increased capacity and improved facilities, they expect to keep pace with the demands for their popular products.

The Society of Medical Jurisprudence met last week at No. 12 West Thirty-first street, when Dr. Wm. A. Hammond read a paper entitled "Personal Rights and Fraudulent Advertising." A committee was appointed to present to the Legislature a bill making it a criminal offense to use without consent the name of any physician as recommending any patent medicine.

An international exposition is being arranged for Melbourne, Australia, to be opened next August and continued for six months. Space has been reserved for American exhibits. Mr. J. T. Sheehan of 103 Summer street, Boston, expects to be appointed American agent, but it is rather late to commence arrangements for an exhibition of American goods at such a distance in August.

Last week a large whale was sighted off Amagansett, and on the signal being given by the blowing of horns the crews put out from shore and started in pursuit. After a short but exciting chase the whale was harpooned and killed and towed ashore. This is the first whale captured on the Long Island coast this season. It is estimated that the whale will yield sixty barrels of oil.

The London firm of Rose, Wilson & Rose was dissolved by limitation on January 1, and Mr. John H. Usmar of the firm intends to conduct business under the name of John H. Usmar & Co., to whom the London business of the Thompson & Bedford Co., limited, of this city, has been transferred. It is understood that the other partners in the firm of Rose, Wilson & Rose will continue under that name.

The government water proof paints made by the Government Water Proof Paint Co., of Boston, are prepared ready for use and retain colors better than anything known. They are guaranteed to be absolutely waterproof, do not crack or chip off, retain a fine gloss without varnish and have the best preservative qualities for wood known. Our readers should consult the card in our advertising columns.

If, as has been written, "A thing of beauty is a joy forever," then joy has certainly been brought to the hearts of those who have been fortunate enough to secure one of the handsome lithographed calendars, which were issued by Messrs. Hammill & Gillespie of this city. The firm announce with deep regret that their supply is entirely exhausted, and they are unable to obtain more from the publishers.

A press dispatch from Lyons, N. Y., says that peppermint growers in that vicinity are jubilant over the rescinding by Secretary Fairchild of the order allowing importers of Japanese peppermint oil to put up their oil in smaller bottles and reship it to Europe without payment of duty. The protest from Wayne county against this order was most emphatic, for had the order been allowed to stand great loss, it is said, would have resulted to the farmers of that section.

A paper made by Herr Ladewigg, Germany, will resist the action of both fire and water. The manufacture is accomplished by mixing twenty-five parts of asbestos fiber with from twenty-five to thirty parts of aluminum sulphate, moistening the mixture with chloride of zinc and thoroughly washing it in water. It is then treated with a solution of one part of rosin soap in eight to ten parts of a solution of pure aluminum sulphate, after which it is manufactured into paper like ordinary pulp.

A pane made of white paper manufactured from cotton or linen and modified by chemical action, is the newest invention for stained windows, The paper so prepared is dipped into a preparation of alcohol and camphor, which makes it like parchment. From this point it can be molded and cut into remarkable tough sheets, entirely translucent, and it can be dyed with almost the whole outline colors, the result being a translucent sheet showing far more vided hues than the best glass exhibits,

Messrs. Chas. Kaestner & Co., paint machinery manufacturers, of Chicago, report following shipments: Geo. Kirby, Jr. & Co., New Bedford, Mass., one 72-inch putty mill, complete. Keough Bros., Superior, Wis., one 16-inch Western mill and mixer. The E. F. Halleck Lumber and Manufacturing Co., Denver Col., one 72-inch putty mill, one 24-inch Kaestner lead and zinc mill, with mixer and cooler, one 20-inch Western mill and mixer, one 36-inch lead mixer, two 36-inch suspension mixers, one gang of four Gaston mills.

The self-sealing screw top cans for paints, oils, etc., made exclusively by the Postal Package Co., of Baltimore, are a great improvement over the old style. There is no expense for solder or fuel, no skilled labor to solder on the tops, can or top is not destroyed in opening, can be used any number of times, easily sealed or opened by a lady or child, do not require a tool or knife to open them; if contents are not removed when opened, the top can be replaced in a moment and will be perfectly airtight.

Late reports from Wheeling refer to the fact that a project is on foot to establish a plate glass works there, and state that the matter has so far progressed as to be almost a surety. It appears a number of Eastern capitalists submitted to the Wheeling Chamber of Commerce a proposition to start a plate glass factory in that city with a capital stock of $400,000, provided the city would guarantee $350,000 of the stock. It is stated that $175,000 of this amount has already been pledged, and a committee appointed to raise the balance, with every prospect of success.

The muriatic acid "combination" has issued a circular to all alkali manufacturers who have not been selling acid this year requesting them to promise not to sell any acid this next year at any price, their excess production (over their requirements for bleaching powder) to be run into the river to feed the fishes or to polish the copper and iron bottoms of the ships floating in the Mersey, but on no account must they offer it for sale and thereby interfere with the exclusive dealing of those who wish to make the acid trade their own.—*Chem. Trade Journal.*

Mr. Edward Weston, an American electrician, proposes, says the London *Standard*, to add to the terrors of war by the use of nitrate of amyl, which is to take the place of the bursting charge in shells. This genial inventor points out that the bursting of a few of these missiles on board a man of war would at once throw a whole crew into a state of temporary paralysis, which would last until the vessel could be taken possession of by her foes, who, he is careful to state, would of course tow her from the scene of action, open the ventilators, and resuscitate the insensible crew.

The lawsuit respecting the lanolin patent in which the Berlin firm of J.D.Riedel endeavored to obtain the annulment of that patent held by Messrs. Benno Jaffe & Darmstadter, has been decided by the German Imperial Court in favor of the defendants. The court holds that the mixing of pure wool fat and water constitutes an infringement of the patent in question, a judgment which upsets that of the German Patent Office authorities, who had declared that the patent only protected the successive manipulations required for the manufacture of lanolin, and not the mere mixing of wool fat and water.

The total amount of phosphates exported from Montreal during 1887 amounted to 20,349 tons, against 19,298 in 1886, a gain of 1,051 tons though less than in some previous years. The Canadian *Mining Review* states that the low water in the Lievres river prevented the forwarding of a considerable quantity from the mines in Portland, and some further output was held over in hopes of a better market next year for the lower grades. In addition to the amount exported to Europe should be reckoned about 200 tons used in Canada and about 300 tons sent to the United States; so that the total deliveries of the year will approximate 21,000 tons.

"A practical treatise on animal and vegetable fats and oils," by W. T. Brannt of Philadelphia, has been published by Henry Carey Baird & Co., of that city. The matter of Mr. Brannt has been collected from widely extended sources, and treats very thoroughly those oils which are peculiarly American, whether fixed or volatile, more especially cottonseed, lard, peppermint, sassafras, birch, etc. The title of this volume conveys a fair idea of the contents. The publishers have adopted a system of issuing with each of their new and important publications a circular giving the full table of contents and specimens of the illustrations. Such a circular of this book can be had on application to the firm named.

President Campbell, of the Window Glass Workers' Association, in his annual report says the window glass industry has increased over 75 per cent in eight years. In 1880 there were 640 pots in operation, and in 1888 there are 1,148. Last year there were over 1,000,000 boxes of window glass imported, and in October and November there were over 200,000 boxes, of the average value of $1.15 a box laid down in New York. About one-third of the glass consumed in the country is imported, and the imports increase every year. The fact is that the steamships, railroads and cable lines have reduced distance to such an extent that glass produced anywhere in the world can be laid down in New York city in less than twenty days. Freight rates from Liverpool and Antwerp are as cheap as they are from Pittsburg to New York city.

The valuable "telephone support" is the invention of Mr. Samuel Rosenblatt, of the firm of R. Rosenblatt & Co., proprietors of the New

York Soap Works. It is made of solid brass, heavily nickel plated, and mounted on black walnut, and in addition to being an ornamental accompaniment to telephones, it will remain in perpetual service without getting out of order. The support will be found to be of great convenience in holding the receiver to the ear thus securing perfect liberty for the hands, and giving an opportunity for holding papers or writing while listening to a conversation over the telephone. It can be adjusted to suit persons of any size, and a simple touch will bring it to the ear to remain stationary until returned to its place. The contrivance is patented in all countries, and made by the Oriental Manufacturing Co., corner of Water and Market streets,

A meeting of the leading men interested in the manufadture of aluminium metal was held Saturday at Findlay, Ohio. The object of the meeting, as given in a special telegram, was to form an aluminium trust. In this city the only stock of aluminium of any extent is carried by one firm, the head of which was seen regarding the trust and said: "I don't understand the object of having a trust, when the total production of aluminium in the United States does not amount to a row of pins. There are a great many manufacturers in the country who have produced a few onnces, but the total product is practically nothing. The country is flooded, however, with hundreds of inventors who have discovered a cheap way of obtaining the metal and want nothing but capital to realize millions. It is probable that the meeting at Findlay was one of capitalists who intend to take hold of some such invention."

We are informed from Cincinnati that Judge, Jackson has rendered a decision in the United court, in a case representing about $100,000 of claims against the Fidelity Bank, which was wrecked by the Harper wheat deal. Mr. W. J. M. Gordon the manufacturer of glycerine, in the regular course of business, deposited to his account in the Fidelity Bank a check for $4,067 on the Monroe Bank of Rochester. N. Y., and obtained from the Fidelity Bank a draft on New York for $3.200. The next day the bank failed to open its doors, and Mr. Gordon telegraphed to Rochester to stop payment of the check he had deposited. The draft on New York came back protested. He then asked the Fidelity's receiver to place him on the bank's books in the same position as before he deposited the Rochester check, and obtained in part payment the worthless draft. The receiver applied to the court for instructions. Judge Jackson's decision is that when the Rochester check was deposited and was credited to Mr. Gordon on the Fidelity's books, the title of the check passed to the bank and is now in the receoiver. Mr, Gordon stands, therefore, in the same position as the other depositors, and can only come in for dividends as they are declared by the receiver.

CORRESPONDENCE.

Countenanced Blackmail.

A FEW MORE WORDS ON THE "PRICE CURRENT" EXTORTION.

NEW YORK, Jan. 10, 1888.

Editor OIL, PAINT AND DRUG REPORTER:

We have not had, like friend Seabury, the advantage of a "rest," but in so far as we have been able to cope with his "definition," we incline to the opinion that "commercial phlebotomy" is practiced mainly by butchers, veterinary surgeons and pugilists. We had, however, no intention of engaging in a controversy when we communicated our views regarding the ethics of "Price Current" advertisement. The discussion of "quasi pharmaceutical journals," "subsidized organs" and "hybrid publishers" may be germane to the subject, but we wish only to say a further word upon our attitude in the premises.

This whole controversy began with the lament of a victim of "blackmail" at the hands of a jobbing druggist. This "Victim" and his fellows distinctly held that the solicitations and representations of the jobber, apropos of his price current, addressed to the manufacturer, are such that they constitute in effect, an extortion upon the implied threat of injury to the manufacturer who does not advertise in it.

It is impossible to believe that the jobbing druggists of this country may be justly accused of blackmail. It is preposterous to suppose that when a manufacturer declines upon good grounds, a proposal to advertise in a price current, that the jobber will maliciously discriminate against him and maintain an unjust and dishonest position to said manufacturer; especially so, if this refusal is based upon what is held to be the proved notoriously unprofitable character of the "medium" proposed. On the contrary, he must rather give the manufacturers credit for common sense and the courage of his opinions.

It depends upon the "point of view."

The jobber is naturally much impressed with the importance and advantages of his annual price current of which he is about to issue "so and so many M's." He would "like to secure a few first class ads," and makes out the best "prospectus" he can.

The advertiser from his point of view may say in reply: "All very fine; thanks for your kind expressions, etc., but it won't pay us." He may, on the contrary, deem that it may chance to be a desirable medium for reaching his clients.

We do not believ that a "fair and square attitude upon correct business principles towards this question of advertising will work any enduring injury to any firm. Otherwise, we must infer a reign of terror, not of principle.

All business relations exist upon some sort of equitable considerations.

If these price currents are abused as a means of profit to the jobber, act accordingly; do not support them. Then they will exist only as they must, to fulfil their proper and indispensable purpose in the trade.

FAIRCHILD BROS & FOSTER.

OBITUARY.

W. H. JOHNSON.

Telegrams were received here on Friday last announcing the death of W. H. Johnson, which took place at the Rathbun House, in Elmira, early in the day. He was discovered by a chambermaid lying on his back, the right hand with a revolver at his side, and his left hand across his breast. About the region of the heart, where the fatal bullet had penetrated, was a pool of blood. The clothing, which had been removed, was on a chair near the foot of the bed. An overcoat and silk hat were hanging from a hook on the wall, and near by was a well filled hand valise, which contained clothing and toilet articles. There were insurance policies on his life in the Protective Life Assurance Society for $5,000, and one in the Mutua Benefit Society of New York for the same amount. For over ten years Mr. Johnson had been known in financial circles in this city, and on the Produce Exchange and Consolidated Stock and Petroleum Exchange he will be regretted by a host of friends. W. H. Johnson, or "Harry," as he was more generally known, was born about thirty-eight years ago in Hornellsville, N. Y. His family is well known and highly respected there, and "Harry" was understood to be interested in real estate and other properties about that neighborhood. His early life was spent in the Hornellsville bank, where he received a training which eminently fitted him for a financial career. Some ten years ago, following in the footsteps of A. M. Palmer (the Palmer and Johnson families having been friends for many years), Mr. Johnson came to New York and went into the oil brokerage business. He opened an office at No. 55 Broadway, became a member of the old New York Petroleum Exchange and subsequently of the Consolidated Stock and Petroleum Exchange and was also a member of the Bradford (Pa.) and Oil City petroleum exchanges. In 1879 A. M. Palmer invited the dead broker to take up Sheridan Shoo's interest in the partnership existing between them in the Union Square Theater, on the understanding, however, that Mr. Palmer should be the sole manager, and repay Mr. Johnson at will the money the latter placed in the venture. This was shortly before the production of Bronson Howard's "The Banker's Daughter," and the business, by the success of that piece, became so prosperous that within a year or two after the partnership between Johnson and Palmer was formed the latter purchased the former's interest, and Johnson actively resumed his brokerage business, which he had never entirely relinquished. Of late years Mr. Johnson seemed to be in poor health and complained that he was a martyr to dyspepsia. In addition to this he was of a most nervous temperament, tall and remarkably thin. He was very popular among his associates, was single and known to have a married sister living in Hornellsville.

JULIUS ROSENBERG.

It is with deep regret that we announce the death of Mr. Julius Rosenberg, of the firm of S. Rosenberg & Sons, varnish manufacturers of this city. His death occurred very suddenly at three o'clock on Sunday afternoon from heart paralysis. He was 34 years of age, and from his boyhood had been connected with the firm mentioned. He was a popular young man and highly respected by his numerous friends. His wife and other relatives have the heart-felt sympathies of his large circle of business associates in their bereavement. The funeral will take place on Wednesday morning at his late residence, 170 E. 72d street this city at 9:30 a. m.

CUSTOMS DECISIONS.

The assessment by collector at New York at 10 per cent ad valorem on asphaltum, claimed to be free of duty, is affirmed on the appeals of H. R. Bradburyy, per Rhein, Oct. 8, 1886; E. H. Woolton, per Moresca, Dec. 15,1886; San Pietro, Sept. 17, 1886. (Dec, 28.)

The treasury department has decided that certain starch imported at San Francisco returned by the appraiser as rice starch and which has since been proved to be "Tahiti arrow root," is entitled to free entry under the tariff provisions for "arrow root."

The secretary of the treasury has revoked the instructions of November 1, under which imported oil of peppermint was allowed to be repacked in bond for exportation, and has instructed the collector at New York that such privilege will not be permitted in future.

The Secretary of the Treasury has submitted to Congress the draft of a bill prohibiting the importation of opium containing less than 9 per cent of morphine, and authorizing the Treasury to seize and destroy all opium prepared for smoking. The Secretary says that under the existing law the department is unable to suppress smuggling opium by systematic organizations on the Pacific coast without the adoption of the measure indicated. If congress is not disposed to prohibit or restrict the importations of opium for smoking, and desires to obtain revenue therefrom, the present tax of $10 per pound should be materially reduced, so that the inducement to smuggling shall be lessened.

PETROLEUM NOTES.

Last week a rig on the Martin farm, Washington field, leased by the Central Oil Company, of Wheeling, was burned. The cause of the fire is not known.

The petroleum exports from Philadelphia for the past week were 1,199,370 gallons, shipped almost entirely to Spain. The total shipments for the year 2,826,476 gallons, while at the same time in 1887 the shipments were 4,178,186 gallons.

Further experiments with the natural gas at the Leland Hotel well in Chicago have been made, Enriched with an admixture of carbon, it gives a beautifully clear and illuminating flame; and in regard to its heating power, copper wire readily melts under its influence.

The scribblers in the oil region who took exception to the REPORTER'S remarks on the organization of the shut-down pool were the ones that predicted dollar oil before the opening of the new year. Our remarks as to the possible and probable effects of the success of the scheme appear unpalatable. Wait and see.

It is believed that oil has been struck by Johnson, Haines & Co., of Pittsburgh, at their well at Nineveh, Greene county. A considerable quantity of oil has been bailed from the hole, but the owners are working the well as a mystery. Before drilling commenced oil was found oozing through the ground in that vicinity.

Gas was struck at a depth of 1,450 feet in the Seneca Falls well last week. When the gas was ignited it produced a flame eight feet high. Drilling was recommenced, and soon a ten-foot flame was burning. Experienced gas men regard the indications as excellent for a large and steady flow of gas at a not much greater depth. The inhabitants are enthusiastic over the prospect.

Joseph R. Kagy has brought suit against the Northwestern Gas Company, at Findlay, O., to have the lease held by the latter company on the former's land declared null and void, in that the company has not fulfilled its agreement in the lease. The issue is very important, as the great Kagy well, with a daily yield of fifteen million cubic feet, is on the land. The well is worth $100,000.

Among the many oil companies that were organized during the petroleum excitement some twenty years back was the Columbus Company. It was formed in 1863 with a capital of $192 000. This was afterwards increased, first to $200,000, and then to $2,500,000, and then decreased to $500,000. It owns, at present, 143 wells, which are scattered over the entire oil territory of New York and Pennsylvania, and which produce about 253 barrels daily.

The bulk petroleum carrying steamship Standard, built at Roach's shipyard, Chester, for the Standard Oil Company, was launched on Saturday. She is the first steamship ever constructed in the United States for carrying oil in tanks. The vessel has a length of 175 feet over all, a beam of 30 feet, and depth of hold of 12½ feet, and will carry 200,000 gallons of the produce. The Standard will be commanded by Captain Stevens.

At the Produce Exchange, a memorial has been prepared and addressed to the petroleum committee, asking that a clause be inserted in the trade rules disqualifying refined petroleum manufactured from Lima crude oil as a good delivery under contract for refined petroleum. The reason for this request, it is claimed by the supporters of the movement, is that refined petroleum developed from Lima crude oil has never equaled that manufactured from the Pennsylvania oils. It is further asserted that practically it is even poorer in quality than the Canadian oil, which has long been excluded from this market as a good delivery.

Argument in the case of George Rice, of Marietta, O., against the Louisville and Nashville and other Western and Southwestern railroads began before the Interstate Commerce Commission at Washington Monday. The hearing in this case attracted considerable attention a few weeks ago. J. Randolph Tucker, of Virginia; Judge Loomis, of Ohio; Franklin B. Gowen, formerly president of the Reading Railroad, and A. D. Follett, appear as counsel for Mr. Rice and occupied most of the day in reviewing the testimony and in presenting a general statement of Rice's grievances growing out of alleged discriminations against him in the matter of oil rates.

Interest in the Canonsburg field has been greatly increased by the coming in of the Buchanan, and the increased output of the McKeown. Oil men are now skirmishing through the country trying to lease land. On Friday John Phillips leased a tract of 35 acres adjoining the Buchanan farm for $4,000 bonus and one-eighth of the oil. The Canonsburg field bids fair to boom in the near future. The McKeown well has been greatly improved by sinking to the Gordon sand. She is now doing 100 barrels a day. Fishers' Buchanan well is making 75 barrels from the top of the 50 foot sand. The rig for the well on the McNamara place, near the Buchanan, is completed.—*Canonsburg Notes.*

The Warren *Paragraph* speaks thus of the Normal school well: "To give the general opinion in a nude state, the well is a five or six barrel producer when she is 10 days old. It is quite a strong gasser when on dress parade, but to day the salt water from the second sand has got the better of gas; hence her silence. Some very good sand was found, but the owners are in hot water. They are afraid to drill the well deeper because, you know, nothing would drive a lot of operators away from the neighborhood of a small well quicker than to see it fill with pickle. So it seems to be the general policy to keep them here long enough to dispose of some of their land."

One of the most important organizations which has ever spung into existence in the oil region is the Association of Drillers, Dressers, and Oil-well Contractors. There are two lodges, one in Butler and the other in Washington County. The former has a membership of 300 and the latter 200. They expect to get about 2,000 altogether. The organization spreads over a territory of nine districts embracing Allegheny, Forest, Warren and Clarion counties It is for mutual protection. It is claimed that a corporation has said they have $100,000 to give to the association if they promised nor to work in the districts named above. The idea is to entirely shut off the output of oil, and if the members of the association do not work then they are paid $1 a day.

The great pipe line now being built through the Northwestern Ohio oil field is progressing at a rapid rate, notwithstanding the severe winter weather. The line follows the Lake Erie and Western Railroad from Lima to a point near Findlay, where it leaves the line of the railroad and crosses the country to the tank farm in Liberty township, and thence north to North Baltimore and Cygnet. The line at the north end of the field has been laid to a mile south of North Baltimore, a distance of about seven miles. Cygnet will be the first pumping station. In addition to the present station of the company, additional buildings are now in process of erection on the tank farm, about a mile from Cygnet. Sixty-two pumps will be used to force the crude petroleum through the line to the Zurmehley farm, near Criderville. A relay will be put in at Findlay to keep the pressure, and to take care of the oil from the Hancock county field.

The Bradford oil field has produced, down to the close of 1887, 140,000,000 barrels of crude petroleum, or 6,964,000,000 gallons. The field commenced producing oil in 1868, when a few of the ventures of Job Moses, near Limestone, showed signs of success. Little was done in the way of developments until 1875, when the Butts wells, near Tarfoot, marked the opening of the Bradford field. The production in the year 1875 was about 25,000 barrels. The next year it was increased to 380,000 barrels, and in 1877 1,420,000 barrels. November 3 there were but ten producing wells in the Bradford field: now there are 15,000. The greatest yearly output was in 1881, with 23,000,000. In 1882 it dropped to 18,000,000, and last year the total was 7,700,000. The amount of capital invested in the production or this field is placed at $100,000,000, which does not include the elaborate pipe line system or the iron tankage necessary to store the oil.

Referring to the edict of the governing committee of the New York Stock Exchange that no wires of any kind shall lead from the board room to the new building of the Consolidated Stock and Petroleum Exchange, President Wilson of the latter exchange has sent out the following statement: "The varied efforts of the New York Stock Exchange to annoy the Consolidated Exchange have been ignored by it because we felt that they were childish in spirit and impotent in performance. Our policy has been to go right on doing our work by attending to our own business affairs and not waste valuable time and good energy on any rival. This last exhibition by the management of the New York Stock Exchange, by which they endeavor to cut off their members from the occupancy of our new building, bears the same mark of fear and distress which has characterized their previous movements. When I read the statement in the daily press in regard to the resolution I was loath to believe that such was the fact. Of course it is of no consequence to us whether the measure stands or is revoked. It may prevent Stock Exchange houses from securing commodious quarters in our building, but that is their loss and not ours."

At a medical banquet recently held at Olean Mr. John Sloan spoke as follows of the oil industry of that city: "Very few persons, indeed, know that Olean is one of the most important refining places in the world, but such is the fact, and furthermore it is one of the most important terminal points of the pipe line system in the country. The Acme Refinery is one of the enterprises which have given a name and a fame to Olean. Some idea of the magnitude of the business done there may be gathered from the fact that the force of men employed in all branches of business number 500. The amount of crude oil which can be refined in one year is 1,100,000 barrels. To do this work

the enormous amount of 30,000 tons of coal, or its equivalent of gas, is used. The capacity of the works has been largely increased year by year. For eight weeks past 60 car loads of oil per day have been shipped. To supply the empty barrels for these immense works the company has a barrel factory adjoining. Running to its full capacity this factory can make 3,000 barrels in ten hours at the rate of five per minute. The number of tanks are somewhat over four hundred, with a capicity of nearly 13,000,000 barrels, which is worth at the present time nearly one dollar a barrel.

MISCELLANEOUS.

New Business Enterprises.

John M. Sweeny and others are making efforts to form a $400,000 stock company to establish plate glass works in Wheeling, W. Va.

The Morristown (Tenn.) Medicine Co., capital stock $25,000, has been formed to manufacture patent medicines.

The Louisville (Ky.) Asphalt Varnish Co. and the Falls City Varnish Co. have been consolidated as the Collins Varnish Co., with a capital stock of $100,000. Lewis Collins is president.

The Imperial Kaolin Co., capital stock $150,000, will be incorporated to develop kaolin mines in Sally, S. C. George A. Wagener, of Charleston, will probably be president. The company control about 2,000 acres of kaolin lands.

A. C. Diamond and others have organized a company to develop oil lands in the vicinity of Lexington, Ky.

Failure of Wm. F. Kidder & Co.

Messrs. Wm. F. Kidder and Vass Houghton, composing the firm of Wm. F. Kidder & Co., manufacturers of proprietary goods at 83 John street, made an assignment last Friday without preferences to Mr. B. Y. Pippey, a dry goods commission merchant. The personal property of Mr. Kidder in New Jersey, including large tracts of real estate, was included in the assignment. The failure was a genuine surprise to the trade, as Mr. Kidder was generally supposed to be transacting a prosperous business. It is said that his embarassment was caused by important real estate transactions and heavy advertising of his specialties in the daily press. Mr. V. Houghton is an elderly gentleman who has acted in the capacity of clerk for many years and merely served as "Co." of the firm for convenience sake, according to the statement of an attache to a representative of the REPORTER. An effort was made to see Mr. Kidder but he left everything in the hands of the assignee and remained at home for a few days. The assignee was also absent on account of sickness, but half a dozen clerks and managers of different departments were present awaiting developments. They could give no idea of the amount of liabilities or assets but said that Mr. Kidder fully expected to pay every dollar and resume business. He started in 1869 with Mr. Eugene Wetherill (the husband of Emma Abbott) as partner; this continued until 1872 when Mr. Geo. W. Laird succeeded Mr. Wetherell and the firm became Kidder & Laird. When the latter retired a few years since to do business on his own account, the firm was changed to its present style of Wm. F. Kidder & Co. One cause of the failure was attributed to the assistance he is said to have given certain creditors of Mr. Laird, who suspended business some months ago and resumed again. Carbolic preparations, pepsin, ointments and digestylin are the principal preparations of Wm. F. Kidder & Co., in addition to being sole agents for carbolic soap.

Mr. Kidder has the sympathy of the trade in his misfortune and the hope is expressed that he will soon resume business. If integrity and ability count for anything, Mr. Kidder will shortly overcome the difficulty and successfully manage the large enterprise that was forced to suspend on account of an unexpected combination of circumstances. In addition to the qualities named, the gentleman has pluck and enterprise sufficient to carry out the undertaking, and this, added to the high respect in which he is held by the trade, encourages his friends to look for a brighter future.

Annual Meeting of Flint Glass Manufacturers.

The annual meeting of the Flint Glass Manufacturers' Protective Association was held in Pittsburg on Wednesday, Jan. 11. There was a very full representation, and the proceedings were characterized by the most harmonious action on the various questions presented. There were no reports from officers or committees, but a general and interesting discussion of last year's events and experiences was had. The election of officers resulted in the selection of Mr. D. C. Ripley, of Philadelphia, for president; Messrs. James Gillender, of Philadelphia, and James McCloy, of Pittsburg, vice-presidents; and Mr. Thomas Evans, secretary and treasurer. These officers, with Messrs Andrew H. Bryce and Paul Zimmerman, form the executive board for the ensuing year.

The discussion demonstrated that the condition of trade in 1887 was fair, the demand being steady and the changes in prices slight. According to the dealers, there was a slight tendency toward an advance in the prescription [illegible] trade in the pressed ware branch does not seem to have affected prices either for an advance or a decline. The manufacturers decided upon no new policy regarding the strike, and, from the reports reaching us, but little attention was given to the matter during the convention.

Proprietary Medicines Destroyed by Fire.

An extensive fire on Sunday night at 54 and 56 Warren street did considerable damage to two proprietory medicine laboratories and valuable stocks of goods. Mr. Lyman Brown, manufacturer of the "seven barks" and shakers medicines, is said to have valued his stock at $50,000, upon which there was an insurance of $12,000. A. J. White & Co., manufacturers of "Kaskine," are represented to have lost $5,000 by the fire. The office and warehouse of the U. S. Bottle Packing Co. were also made a wreck, entailing a loss of about $15,000. Before the fire was extinguished, Mr. Lodgers, of the U. S. Bottle Packing Co., displayed characteristic enterprise by placing orders for new and improved machinery, by the aid of which he will be able to facilitate business, and in a few days all demands for the popular goods will be filled without delay.

An effort was made on Monday to see the parties and get further particulars, but as only smoking ruins were left in the place of substantial buildings, it was necessary to seek quarters elsewhere and representatives of the three firms were absent on this mission, so that the amount of insurance and actual loss are not known. Only the walls and joists are left standing, the fire having made a clean sweep from cellar to garret.

A Big Glass Manufacturing Project.

For several weeks past items regarding the establishment of a large glass works at Grapeville in the suburbs of Pittsburg have appeared in the various journals representing the glass industry, and also the daily press, creating great interest and much speculation in the trade. *The Commoner and American Glass Worker*, one of the best posted papers in the West, claims to have got at the bottom of the project and in its last issue gives a full account of what it has discovered. According to this the prime movers are two prominent Pittsburg glass manufacturers, one of whom is represented as the moving spirit in one of the big companies supplying Pittsburg with natural gas. This last mentioned gentleman owns several farms in Grapeville, which is said to be the center of one of the grandest gas fields in the State, on the line of the Pennsylvania railroad. Several other glass men and Eastern capitalists are said to be interested in the enterprise, and it is proposed to erect at Grapeville the largest plate glass, window, and flint glass works and bottle factories in the country. The contracts for the main buildings, three of them 400 feet long have been given out, and work on them begun. It is proposed to establish a city at this point, and the streets are being laid out and graded and a water works is to be built. The workmen will be furnished with nice dwellings which they can purchase on monthly payments.

To make the scheme successful it will be necessary to remove several of the works now in Pittsburg to the new "Glass City" as it has been designated. Tank furnaces are to be erected which will be an improvement on the Pilkington tank, in use in St. Helens, England, and which will employ three sets of men continuously, the tanks being kept full of glass all the time. It is the intention to build the houses as well as the works of fire-proof material and no insurance will be carried on any of them. The amount of capital invested is not definitely known but is said to amount up to millions, and when the project is completed, Grapeville, it is said, will be the largest glass center in the world. The works, it is believed, will be so far finished at the beginning of the next fire as to be able to start up then.

Druggists Mutual Fire Insurance Company.

An election for Directors and members of the Executive Committee of the Druggists' Mutual Fire Insurance Company, was held in Philadelphia last week with the following result:

Directors—Robert Shoemaker, Edward H. Hance, Henry N. Rittenhouse, Mahlon N. Kline, Valentine H. Smith, Henry C. McIlvaine, James C. Roller, Philadelphia; George H. Keily, L. H. Harris, M.D., Pittsburgh.

Members Executive Committee—E. R. Hunt, Secretary, J. W. Perkins, Portland, Me.; G. D. Gilman, E. H. Doolittle, E. Waldo Cutler, Boston; D. C. Robbins, Henry Dalley, Jr., J. M. Peters, New York; W. B. Blanding, Providence, R. I.; Wm. H. Lucas, Philadelphia; J. F. Demoville, Nashville; L. L. Lyons, New Orleans; J. A. Matthews, Memphis; M. C. Peter, Louisville; J. Clif. Richardson, C. F. G. Meyer, St. Louis; F. W. Schulte, Kansas City; W. B. Slosson, Leavenworth, Kan.; T. H. Hinchman, Detroit; Daniel Stewart, Indianapolis; Oliver Fuller, Chicago; F. Dohmen, Milwaukee; D. R. Noyes, St. Paul; H. T. Clarke, Omaha; Samuel M. Strong, Daniel Meyers, Cleveland; C. A. Heinish, Lancaster, Pa.

The company is in a prosperous condition. Over half a million of insurance has been written within three months, and no losses have been met with; business is conducted at a minimum of expense and patrons are given insurance at cost. The projectors of the enterprise are more sanguine than ever of its future prospects, and the wholesale drug trade are giving it substantial support.

Disinfectant Candles.

We recently referred to the paper by Messrs. Casson and Brownen on a new way of combining antiseptic materials in candles, and since then we have had an opportunity of putting the candles to practical test, says the London *Chemist and Druggist*. In appearance the candles do not differ from ordinary ones; they burn without guttering, and as they burn they give off the odor of phenol and iodine, but not in so abundant quantity as to make the atmosphere of a room unpleasantly medicinal-like. The powerful antiseptic character of phenol and iodine is well known so that the efficacy of the candles as a disinfectant is obvious; but we may explain that the phenol and iodine do not exist in the candles in the free state, but in the form of iodo-salicylic acid (not iodoform and salicylic acid, as has been stated); and this acid on decomposition by the heat of the burning candle, yields iodine and phenol in gaseous form. The idea is a happy one and deserves success.

The Syrian Sponge Fisheries.

A well known London firm addresses the following letter to two drug journals in the English metropolis, in relation to some official inaccuracies noticed in a consul's report:—

"In the *Daily Telegraph* of December 23 a leader appeared having for its theme a report of the United States Consul at Beyrout on the Syrian Fishery. The report has been either summarized or is inaccurate in some of its details. We therefore beg to offer a few remarks, which will correct any wrong impressions your readers have received by its perusal. In the first place, it is obviously incorrect to state that the sponges 'have to be freed from sand.'' Seeing that the sponges never contain any sand in their original condition, there is no necessity to free them from that which would have practically suffocated the living animal as it is found by the divers. Secondly, the *Daily Telegraph* writer states that 'the common sponge is chiefly found in the waters whose fisheries the United States Consul has described.' Now, the Syrian fishery referred to furnishes, it is true, sponges inferior in quality to those fished on the more important grounds of the coast of Barbary and elsewhere, but there are much commoner sorts obtained from other Mediterranean fishing grounds, notably those off the coast of Tunisia, and these latter alone furnish more than all those of Syria. But the great sources of the supply of common sponges are the West Indies, the Bahamas, Cuba, &c., and also the Keys of Florida. In these localities useful sponges grow in greater variety and quicker than elsewhere, and they are also fished by simpler means. These kinds we now import into this country to a very considerable extent, and they are used in the smallest villages, where sponges were scarcely even thought of years ago. The consul's report also states that below a depth of 25 to 175 feet there are no sponges worth taking to be found. This may apply to Syria, but it is far from applying to the more important fisheries of the Mediterranean. We employ divers who regularly descend in diving apparatus to the great depth of thirty fathoms. The pressure on their bodies at this depth is about 75 pounds to the square inch, and as the effect of this is to temporarily impede and almost suspend the circulation of the blood, it may readily be imagined what suffering these brave fellows undergo. But the very reason which induces them to face it is that they find the best sponges at these greater depths. They are all Greeks, and of course are of exceptionally fine physique. We have been assured by the best submarine engineers that no English divers go down so far. Our Greeks can consequently be allowed their claim of being the best divers in the world, although it may be that there is something in the temperature or specific gravity of the waters of the 'tideless sea' which favors its native divers."

Customs Tariff Changes Abroad.

Austria—From a ministerial order respecting the admission free of duty of sacks already used for packing certain goods, it appears that henceforth gall nuts, sumac, pyroligneous acid, lime, tartar and glue are henceforth to be included among those articles of trade in which the return of the sacks is necessary.

France—The Departments of Finance and Commerce have ratified a decision of the Committee of Arts and Manufactures to the effect that bromides and iodides of ammonia should be assimilated in the tariff to salts having potassium for their base, and, consequently, pay duties of 100 and 350 francs per 100 kilograms respectively.

Greece—The exemption from duty, under treaty, of quinine still holds good. Perfumes, alcoholic or not, vinegars, oils, soaps, powders, pastes (aromatic), aromatic herbs and wood, scents in small bags, cosmetics, pearl paste, pearl powder, etc., now pay duty at the rate of 5 drams per oke. The dram is equivalent to 9 6-10d, and the oke to 2·8 lbs. avoirdupois.

Italy—The new Italian Customs tariff which will shortly come into operation, will contain no fewer than 540 classification numbers, instead of 205 as hitherto.

The following decisions affecting the classification of articles in the Italian Customs tariff have recently been given by the Italian Customs authorities: Phenic acid, containing 60 per cent. of light oil. Duty, 38 lire per quintal. Chlorhydrate of quinine. Duty, 5 lire per kilog. Carbonate of magnesia, natural. Duty, 4 lire per quintal.

The quintal is equivalent to 220.4 lbs avoirdupois; the kilogram to 2.204 lbs avoirdupois, and the lira to 9 6-10d.

Switzerland—The following decisions affecting the classification of articles in the Swiss Customs tariff have been given. Pepsin wine. Duties from 30 to 100 francs per quintal. Hartshorn oil raw. Duty, 30 francs per quintal. Camphor oil. Duty, 2 francs per quintal. Chrome ocher. Duty, 3 francs 50 cents. per quintal. "Mugnier" aperient wine, without labels attributing to it medicinal qualities. Duty 16 francs per quintal. The franc is equivalent to 9 6-10d.

Spain—The following decision affecting classification in the Spanish customs tariff has recently been given. Ground colors for painting, composed of two elements, organic and inorganic, and easily soluble in alcohol and ether. Duty, 75 cents per kilog.

New South Wales—An act was recently passed modifying the customs duties on certain articles imported into the colony.

The Window Glass Trade in 1887.

The past has been a fair though not particularly prosperous year in the window glass trade according to the annual review of the general glass trade in the current number of the *Crockery and Glass Journal*. The great labor disturbances in the building trades that distinguished the year 1886 were repeated only in a modified degree in 1887, and ceased altogether in the last half of the latter year. For this reason consumption was steady though large imports injuriously affected the domestic trade. Toward the end of the year stocks of home-made glass became much smaller than usual, indicating an increased consumption. In February last the Western manufacturers organized themselves into an association called the Western Window Glass Manufacturers' Beneficial Association, and succeeded in getting all the Western manufacturers to join it. They then advanced prices, which have been fully maintained since. This end was secured by their exacting a certain sum from each member, which was to be forfeited if such member departed from the regular discounts. They also agreed to take from any member whatever surplus glass he could not dispose of and the plan has worked well. The window glass industry had also its share of the labor troubles during the summer. As early as July the workers put in a demand for an advance of 10 per cent in their wages. During that month and the following various conferences took place, but both parties held their respective positions firmly, and no settlement was reached. On September 28 after a prolonged conference, at which every effort to overcome the deadlock failed, the committees had adjourned, which were called together at night and compromised in an advance of wages to the extent of 5 per cent and certain modifications of rules. The factories did not generally resume operations until the middle of October, six weeks after the regular time, but they have got along well since. Several enlargements and improvements were made during the year, including the rebuilding of two factories and the starting of one that had been idle for many years. No financial troubles of any kind occurred in the trade.

The White Sand Pools.

Since the advent of Cherry Grove in 1882, the white sand pools have played an important part in influencing the value of crude and sustaining the average production of the Pennsylvania and New York Oil Regions. They have generally been of limited areas and short-lived; the territory on which they have been located was usually spotted and treacherous, and on the whole, they have caused disaster to many, while showering forturnes upon a few. The productive wells which they have furnished have been the largest in the world, but dwindle rapidly away to insignificant proportions. In spite of the positive knowledge that every one has in regard to this kind of territory, the report that a well has been struck in some little known locality whose production is quoted by the hour instead of by the day is enough to create a panic on 'Change and put a violent check on any tendency of the crude fractions to move upward. It does little good to point to past precedents at such a time. A well in white sand territory is flowing 100 to 150 bbls. an hour, as the case may be, and everybody is terror-stricken. The figures below show very plainly that the white sand pools has always been vastly over-rated, and has exerted an influence on commercial values altogether out of proportion to its real importance.

The outlying territory from the borders of McKean county, southward to Pittsburg and beyond, has been exceedingly prolific of white sand pools of late years and doubtless more still remain to be discovered. And each month the sanguine wildcatter pursues his search for more of them, and as he reaps his harvest of dry holes and gas wells the chances of their

discovery is steadily narrowed down to smaller proportions.

In the following table the pipe line runs from 12 of the most important white sand pools that have been brought to light within the past six years are given. It will be seen that the production from this source has been increased each year with one exception since 1882. But the total production of the entire 12 pools in six years is only 26,000,000 bbls, a little more than the Bradford yield in 1881, and a few millions in excess of the total output of Allegany.

	1882.	1883.	1884.	1885.	1886.	1887.	Total.
Cherry Grove	2,345,400	755,512	284,912	173,809	108,876	73,540	3,681,049
Cooper	29,864	1,095,558	1,001,849	340,934	201,455	141,155	2,813,805
Baltitown	2,700	774,244	807,508	348,100	34?,313	192,333	2,473,195
Wardwell	.....	.....	701,235	148,808	100,000	60,000	1,010,032
Baldridge, Reibold	.....	.....	982,801	1,813,030	708,276	2,028,728	5,512,835
Cogley	.....	.....	.....	701,001	1,022,394	277,020	2,000,315
Tarkill	.....	.....	.....	.....	659,594	377,221	936,765
Pontius	.....	.....	.....	.....	56?,780	558,370	1,149,150
Shannopin	.....	.....	.....	.....	433,338	690,500	1,173,838
Washington	.....	.....	.....	16,533	2,418 873	2,871,016	5,300,421
Saxonburg	.....	.....	.....	.....	.....	93,977	96,977
Total	2,377,964	3,027,314	3,741,324	3,498,193	6,559,707	7,306,866	26,151,423

In the above table the Wardwell yield for the past two years is estimated. The production of Cogley and Tarkill for 1887 is partially made up from estimates, it having been impossible to separate the runs from the two districts.

Washington stands at the head as the greatest of the white sand pools of recent times, having produced within the last two years over 5,000,000 bbls of oil. The last gauge of the field showed a production of about 5,700 bbls a day from 230 wells. Cherry Grove has produced above 3,500,000 in six years. The runs from Baldridge, Reibold and Thorn Creek, the great white sand districts of Butler County, are included in one total, and if considered as a complete whole would crowd Washington from first place. The production of Taylorstown is included with the runs of the Washington field. Saxonburg, which has attracted so much attention within the past three months, has produced not quite 100,000 bbls.—*Era.*

Exports of Mineral Oils for December, 1887.

Mr. Wm. F. Switzler, Chief of the Bureau of Statistics, submits the following statement of the exports of domestic mineral oils from the United States for the month of December, 1887:

MINERAL, CRUDE.

(Including all natural oils, without regard to gravity.)

	Gallons.	Dollars.
Total for December, 1887	11,611,132	794,126
Total for December, 1886	6,303,655	397,514
Total for 12 months ending December 31, 1887	80,943,839	5,140,737
Total for 12 months ending December 31, 1886	76,337,760	5,067,373

NAPHTHAS.

(Including all lighter products of distillation.)

	Gallons.	Dollars.
Total for December, 1887	425,432	37,123
Total for December, 1886	1,189,788	103,885
Total for 12 months ending December 31, 1887	12,344,669	1,043,915
Total for 12 months ending December 31, 1886	14,306,927	1,243,516

ILLUMINATING.

	Gallons.	Dollars.
Total for December, 1887	35,633,445	2,785,551
Total for December, 1886	35,467,362	2,819,853
Total for 12 months ending December 31, 1887	464,144,803	35,401,044
Total for 12 months ending December 31, 1886	473,285,129	37,939,165

LUBRICATING AND PARAFFINE OILS

	Gallons.	Dollars.
Total for December, 1887	2,177,898	364,840
Total for December, 1886	1,421,126	270,264
Total for 12 months ending December 31, 1887	20,340,820	3,504,942
Total for 12 months ending December 31, 1886	13,749,812	2,636,973

RESIDUUM.

	Gallons.	Dollars
Total for December, 1887	43,554	3,862
Total for December, 1886	4,116	365
Total for 12 months ending December 31, 1887	2,959,093	141,350
Total for 12 months ending December 31, 1886	1,938,553	109,668

TOTAL EXPORTS OF MINERAL OILS.

	Gallons.	Dollars.
Total for December, 1887	49,891,451	3,085,702
Total for December, 1886	44,381,049	3,591,881
Total for 12 months ending December 31, 1887	580,463,229	45,231,988
Total for 12 months ending December 31, 1886	579,673,486	47,016,695

Canada Oil Report.

The crude market has been fairly active since our last issue and the result of the week's trade has been slightly in favor the bulls. The market closed firm at 74c, with no sellers.

Refined is quiet, with quotations from 9½@10c. The result of the season's trade will not leave a very large balance to the credit of the trade, either in cash or reputation. Sowing to the wind in the opening of the season, they are in a measure, reaping the whirlwind at the close.

In Oil Springs the producers are making an effort to organize themselves, and thus prevent the continued slaughter of their product. In brief, it is proposed that the contemplated Association shall elect an officer through whom all sales shall be made, and who will be empowered to arrange all necessary advances upon oil, apportion moneys and transact generally the financial business of the members. Long ago this paper proposed to producers this identical scheme, and we have to-day the same confidence in its ultimate success. The details are yet unarranged, but we shall next week take occasion to enlarge more fully upon the scheme, but in the meantime we would urge of producers to give the idea their intelligent and careful consideration.

A number of disturbing influences in business matters pertaining to petroleum have served to call the attention of refiners and dealers in illuminating oil to the possibilities of unexpected weakness. There is a careful inspection of conditions and surroundings going on. Oil men in all grades of the business are looking as far ahead as they possibly can, endeavoring to discount all possibilities. Bankers are manifesting a little more care over the discounting of paper, and the advancing of funds. As a matter of fact, dealers have shown even more than the customary inclination to proceed carefully. In explanation of this is cited the fact that buyers have their near future wants well provided for, as a rule, and in the absence of conditions that would make it advisable to do otherwise, are disposed to leave the more distant future for later consideration. On the one hand we hear that the business of refining petroleum which in the past, no doubt, has been profitable, latterly would appear to have added much to the refiners' surplus account. This would certainly not have occurred had the business been conducted as it was a few years ago. Complaints are heard that the products of the still have to be sold on so close a margin that it is next to impossible to make a profit or insure a fair interest on the large capital necessary to construct and operate a modern refinery. It is not necessary in this connection to consider the causes which have brought about this state of affairs, though in a general way they may be stated to be due to competition, internal and external. If, then, it is not possible to meet the competition successfully or profitably with the price of crude oil within the range of quotations that have prevailed during the last year, it must prove a difficult problem for the refiners to solve how they shall be able to successfully compete with each other after the price of crude should go to one dollar or more. A solid movement is on foot by the Oil Springs producers, which when the good seed is sown will no doubt take root right here in Petrolea. Now is the time for the refiners to put their heads together for united action and put refined oil to a figure at which they can make a fair profit and join hands with the producer and pay him a fair price for his crude. The total clearances on the Petrolea Oil Exchange for the week ending Jan. 5, were 26,646 bbls.; for the week ending Jan, 12, were 33,784 bbls.—*Petrolia Topic.*

IS THIS THE WHITE LEAD SWINDLER?

MARK RAYMOND LAZIER

The article published in the last issue of the REPORTER regarding the reappearance of the white lead swindler has caused widespread comment and we have been urged to keep the matter before the trade. Some of the descriptions of this fellow, as well as his methods, correspond with those of the man whose portrait is published herewith, and has given rise to a belief that Lazier and Randolph with his many aliases may be one. If this is the case the publication of this portrait may be the means of checking his hitherto successful career, and if not it may at least prevent Lazier from repeating the practices which lodged him in a Canadian prison from 1884 to 1887. We are indebted for the cut of Lazier to our esteemed contemporary *The Hub*, in whose columns the portrait first appeared, and which did good work in running down the swindler on a former occasion.

How Mexican Lead Comes to This Country.

A correspondent of the *Engineering and Mining Journal* calls attention to a matter in regard to the importation of Mexican lead, which should receive attention. His letter is as follows:—

I desire to call your attention to the most serious menace to the lead mining and smelting interests of the United States, arising from the enormous increase of importations of lead ore from the Republic of Mexico, which come in without paying tariff duties.

Either through the imperfection of existing laws, or through the wrongful administration of the laws, Mexican ores containing lead and silver are classified by the custom house authorities at Paso del Norte, and presumably at other places of entry, as silver ores, and are admitted free of duty when the silver content of the ore reckoned at $1 29 per ounce exceeds in value the lead content of the ore at 40 cents per unit. Thus an ore assaying 50 per cent or less of lead, and 16 ounces or more of silver, comes in free of duty.

Pure galena ore, if it carries 30 ounces or more of silver, comes in free. It is well known that Mexican lead ores are almost universally argentiferous. Hence the effect of the above ruling and practice of the custom house is practically to open the door for free importations of Mexican lead ores. If any ore is too low in silver to enter free, the mixing in of a little high grade ore with it cures the trouble, and the compound enters free.

Since the completion of the Mexican Central railroad the importations of Mexican ores have nearly trebled every year.

What portion of this amount is lead we have been unable to ascertain with accuracy, but from our observation and experience in handling Mexican ores we estimate that not less than 2,000 tons per month of lead are now being imported from Mexico free from duties. When we consider that the entire lead production of the United States is estimated at 11,500 tons per month and that of Spain at 7,000 tons per month, the great danger to the lead interests of the United States from this free importation of lead ores will be appreciated.

There is, moreover, every reason to believe that the quantity will be doubled in another year. The lead mines of Chihuahua are practically limitless. The laws of Mexico compel the working of mines six months in the year in order to maintain title. Labor is obtainable at one-quarter the wages we pay."

The Kane and Elk Petroleum Fields.

THE KANE DISTRICT.

It was the discovery of a productive well in the woods southwest of Kane late in 1885 that started the market on a downward course and proved the beginning of a new producing district. The Craig & Chappeau venture, on warrant 3,767, McKean county, began to attract the attention of the speculative trade early in November, 1885. The usual mysterious rumors were promulgated in regard to the well, and for several days it occupied more importance in the public eye than the developments that were going on at the same moment in the great white sand field of the southwest. On November 18, 1885, the market opened at $1 10¼ and rallied to $1 10¾. Then came the news that Kane's initial well was flowing, and a furore for selling commenced that carried it down to $1 05⅞. There was a partial recovery, but more news from the Kane well, combined with bearish reports from Kinzua Village, brought a further decline in values, and on November 21 the market sank below the dollar line, above which it has not since dared to raise its head.

The Craig and Cappeau strike at once invited investment and heavy capitalists took hold, and land were run up, in most instances to exorbitant rates. Notwithstanding prospects of a low market, there was no lack of operators and conservative procucers induced by the belief that the new well promised a pepitition of the sure and lasting territory of the Bradford field, were ready to pay fancy prices for any lands that were located along their favorite degree lines.

At the close of 1885 the single well of the new district just about to bloom into a full-fledged oil field was producing 96 bbls a day. The pipe-line runs from this well for the month of December were 2,974 bbls. The end of another year found 350 producing wells in the field with a daily average yield of above 3,600 bbls.

Down to the close of 1887, 391 wells have been drilled in the Kane field, 26 of which failed to find oil in paying quantities. The northern part of the field contains possibilities of farther extension, and a few more locations upon which to drill wells if the market should ever warrant it remain, but the field as a whole has dwindled to that point from which there can be no recovery. The total yield of the district to date is less than 2,000,000 bbls, and hardly equal to Bradford's yield for a single month of the year 1881.

The daily average for Kane in 1886 was 3,520 bbls., while in 1887 it was only 1,911 bbls., representing a decline of nearly 45 per cent. The daily average was highest in June, 1886, when it reached 5,702 bbls., and lowest in November, 1887, when it was 983 bbls. The daily average of the field for the entire time which it has been in existence is 2,623 bbls.

The total production of the Kane field as shown by the pipe line runs has been as follows:

1885.	Monthly yield.	Daily average
December	2,974	96
1886.		
January	2,192	70
February	12,178	435
March	38,801	1,252
April	90,506	3,017
May	138,727	4,475
June	171,083	5,702
July	164,957	5,321
August	150,108	4,842
September	141,263	4,709
October	139,655	4,505
November	123,376	4,112
December	111 832	3,607
1887.		
January	91,661	2,957
February	73,578	2,628
March	74 664	2,409
April	73,527	2,450
May	69,218	2,233
June	60,937	2,031
July	55,779	1.799
August	51.105	1,649
September	49,087	1.636
October	46,551	1,502
November	29,491	983
December	32,866	1.060
Total	1,996,085	2.623

THE ELK DISTRICT.

Compared with Kane the Elk county district is of very little importance. Indications seem to point to the fact that there is a large area of territory in this section that is capable of affording productive wells of small caliber. The lands are mostly held in large tracts, and the depth to the producing rock is so great that none but large capitalists who are content to wait upon a long-time investment can afford to operate it.

The discovery of the field is due to Mr. S. B. Hughes, a well-known oil scout, who worked up the territory from the results obtained by the drill in the so-called "Hoodoo" well, on warrant 3,668, in the southeastern part of Forest county, which was sunk by a party of scouts in the winter of 1885. Mr. Hughes' first efforts were in the main unsuccessful.

At the close of the past year about 50 producing wells had been drilled in the Elk section, and their total average daily output for the month of December was but 333 bbls. Few of the wells average better than 15 bbls for the first 30 days after they are drilled. There is not much effort shown to crowd wells very thickly on this kind of territory, and as a rule each well has about 10 acres of ground from which to draw its supply of crude. The sand is less than 30 feet in thickness, and the wells are generally shot with from 100 to 140 quarts of nitro glycerine.

The production of the Elk district for the past year has been as follows:

	Monthly P. L. Runs.	Daily Average.
January	1 634	53
February	650	23
March	1,559	50
April	1,908	64
May	4,1?3	93
June	6,444	215
July	8,553	276
August	10,534	340
September	14,584	485
October	13,595	439
November	7,122	264
December	10,?25	333
Total	81,901	224

—*Bradford Era.*

Sample Exhibition in Buenos Ayres.

The French consul-general at Genoa, in a recent report, states that the first commercial museum of Italian productions established abroad has been opened at Buenos Ayres. The samples number 4,000, and are divided among five departments. The third contains chemical and medical products and extracts. The Italian Chamber of Commerce has had a catalogue prepared containing an exact description of all the samples, with the name and address of the manufacturer, the price in Italian money, conditions of sale, the discounts, the place of delivery, &c. At the opening, the president of the Italian chamber said that it was always ready, by means of the chambers at home, to supply detailed information respecting all articles of Italian manufacture, although the samples were not in the museum, as well as to transmit to home manufacturers information respecting alterations which may be desirable in order to render their goods more suitable for the tastes and wants of local consumers.

The Cork Forests of Tunis.

The British consul at Tunis says that the forests of that country, which covers an appreciable part of the surface of the country, were, until the French occupation, subject to no supervision, and suffered from many evils resulting from the want of that supervision. In 1863, the French, alive to the importance of preserving what remained of these forests, which are the property of the State, placed them under the management of a separate department, which has carefully explored their extent, and conclusively demonstrated that they are an element of national wealth.

It is to the cork forests that the attention of the new administration has been mainly directed. They are situated in a country with a very sparse population, dwelling in huts formed of the branches of trees. Their number is estimated at 12,000 souls, or only one individual to thirty acres. It was open to the French administration, which wields the authority of the Bey, to adopt one of the three following systems in dealing with the woods and forrests, viz., their sale, their concession for fixed period, or their management by the State. The last was chosen as the system best adapted for their preservation and extension, particularly as it was held to be of paramount importance to favor the increase in rainfall in the country; the quantity of which is supposed to be intimately connected with the extent of the forests.

Much has been done during recent years in improving the condition of these cork forests. Roads have been cut through them, and at stated intervals spacious alleys have been frayed to serve as a means for arresting the march of the destructive fires which frequently ravaged them. Above all, much progress has been made in barking the cork trees, an operation which consists in stripping the rough bark of the trunks of the trees, to the height of five or six feet from the ground. This virgin bark is without value, and only for ten years after the trees have been robbed of it is the inner bark available for commercial purposes, the trees giving a crop of cork every ten years. To meet the expenses incurred in these operations there were available the sums accruing from the sale of the trees already felled, and of the bark of the "zen" for tanning. The director of the woods and forests has drawn up the following estimate of the receipts and expenses of his department for three consecutive decennial periods:

Date.	Expenses.	Receipts.
From 1884 to 1894.....	£80,000	£140,000
" 1894 to 1904.....	200,000	480,000
" 1904 to 1914.....	270,000	960,000

Thus in 23 years, or at the commencement of the third decennial period, the anticipated expenditure per annum is £27,000, while the expected receipts are £96,000, leaving a profit of £69,000.

Economical Illumination from Waste Oils.

BY J. B. HANNAY.

It has been said that the fall of Britain from her place among the industrial nations will date from the practical exhaustion of her coal fields, and some prominent writers and economists have actually gone so far as to calculate to within a few days when, in their opinion, this exhaustion will be complete. Now it appears to me somewhat strange that thoughtful men should have made any such prediction. Surely their eyes must have been closed to that huge factor in modern civilization—the advance of science. Admitting for the moment the possibility of our coal becoming exhausted sooner or later, it must not be forgotten that there is in the British mind an illimitable power of invention, an inexhaustible wealth of resource which, when the emergency arises, and long before it becomes acute, will find some substitute for any substance which may previously have been considered indispensable to the existence of any of the industries that maintain us as the first of commercial countries. When we codsider how ignorant we really are of the resources of the earth's crust at any considerable distance from the surface, and that new coal beds of even greater dimensions than the old ones are being discovered, calculations of the kind referred to appear ridiculous. But it is not of coal that I intend to treat in this paper. I propose to deal with a substance which, as a source of light and fuel, I believe will ultimately render coal of merely seconeary importance in our manufactures. That substance is the oil which, in certain parts of the earth's crust, occurs in large quantities and has in places betrayed its presence by coming to the surface in the form of what have been not improperly termed "springs." One of the oldest trades in the world consisted in collecting this surface oil near the Caspian Sea and selling it in Persia for the production of light and heat. And it is of some modern developments of this ancient trade that I would speak to-night. I need not here tell the members of this society of the inexhaustible stores of this oil at Baku, on the Caspian. Neither need I allude to the indications, amounting recently to proof, that similar stores exist in nearly every division of the earth's crust, not excepting even New Zealand; nor that railways, steamers, and stationary engines are being run by oil fuel in Russia, India, Egypt and America, and will soon be running here, as this information has already been given in a masterly manner by Mr. Chas. Marvin, whose patriotic labors merit national recognition.

The proofs are all there that, locked up in the earth's crust, and at no great distance beneath the surface, are enormous reservoirs of oil, the most economical and convenient form of fuel in existence. At present practical men are busy arranging to make this store available for our use in the manifold operations which engineering has established during the century. Pending the opening of these stores, there are at present ready for use large quantities of waste oil, obtained as a by-product from some of our great manufacturing industries, the disposal of which was, until recently, a puzzle to chemists and engineers.

In one industry alone—namely, iron smelting—there could be manufactured enormous quantities of crude oil, and even the few furnaces already fitted with condensing apparatus are sending large quantities of oil into commerce at a very remunerative price. I believe it will not be long before every blast furnace will be fitted with its condenser, and thus add to the fertility of the country by securing the vast quantities of ammonia at present lost, and to the resources and wealth of the country by yielding us oil for the production of light and heat.

It is not of the application of oil as fuel for the great industries that I came here to speak, but of some minor uses to which such fuel is particularly adapted, and which require no revolution in any great industry, but which will aid all industries. I believe such introduction of liquid hydrocarbons for producing light and heat is but "the thin edge of the wedge," and will ultimately lead to its utilization in the great business of the nation. The attempts which have hitherto been made to obtain light from oil have led to the belief that no useful light can be had without the aid of on artificial draught. The trouble and care required in managing such lights rendered the introduction of gas—as an illuminant which required no articial draught—a real boon, and soon the world came to know what a comfort it was to have the house well lit on the long, dark winter nights. Soon the light of the house was used in the workshop; but as operations gained in magnitude, gas was found to be quite unequal to the work demanded of it, and more especially for out-door operations, the want of a good light began to be keenly felt.

The electric light at first bade fair to supply the want, but soon it was found that its very beauty and intensity were the cause of its uselessness for ordinary workshop operations; and I have often seen a workman at his lathe using the antiquated tallow candle, to appreciate the details of his work, right underneath the dazzling glare of an arc lamp.

Now, the first use of the exhaustless store of oil in the earth's crust, which I am going to illustrate, is its need for yielding a powerful diffused light, for conducting difficult work during the darkness of our short winter days and long winter nights. The fundamental difference between a gas flame and one from oil lies in the fact that the gas contains much less carbon, and when the hydrogen burns there is so little carbon set free that it is completely burned away to carbonic acid, as it reaches the outer portion of the flame. The greater proportion of carbon in the oil causes the carbon to be set free in a much denser form, and the paucity of hydrogen makes the temperature of the flame lower, and the combustion of the carbon is incomplete. Hence smoke arises.

To obviate this, artificial draught has been resorted to, by placing a funnel over the flame, and so causing the air to impinge at the root of the flame, or the same effect has been attained by means of a small fan. When it came to producing large flames, the matter of dealing with the wick and draught became much more difficult, and when a light was wanted for outside purposes, all arrangements with glass funnels were impossible, while such a weak blast as could be used for supplying oxygen to this flame was at once reversed and the flame extinguished by the slightest breeze of wind. What is required for an open air illumination, unprotected by glass, is such a mixture of hydrocarbon and air as will set free only as much carbon as will be consumed by the time it reaches the edge of the flame, and a flame of such pressure or stiffness as will resist the wind. A type of the first condition is found in those gas producers whose action depends on passing air through some of the volatile hydrocarbons, when the air takes up sufficient vapor to yield the amount of carbon on combustion to give luminosity like coal gas. Yet the bulk of that gas is air. Now, a carbureted air may be closely imitated by intimately mixing finely divided liquid hydrocarbons, or even solid hydrocarbons, with air, the state of division being so fine that the hydrocarbon may be said to be equally distributed throughout the air. When such a mixture is fired, the heat of the initially burning hydrocarbons volatilizes the remaining hydrocarbons and produces that mixture of hydrocarbon vapor and air which closely imitates coal gas. But with this important difference. The blast required to disintegrate the oil is such a powerful one that the flame is rendered very stiff, and resists the deflecting power of the wind, so that the naked flame thoroughly illuminates a space as well during stormy weather as during calm. Now, that is the great desideratum of an outdoor light. Besides this, the amount of air supplied for combustion is in no way dependent on the draught created by the lamp, but can be varied to the most extreme proportions at will, so that such a lamp will burn any kind of hydrocarbon, from the most volatile naphtha to the thick tar, which requires to be warmed to flow. In fact, any of these hydrocarbons may also be burned either so that no free carbon is given off, and hence the flame is non-luminous, like a Bunsen flame, or it may be given less and less oxygen, its luminosity increasing until the point is reached where it begins to give off unburnt carbon, and smoke is produced.

Then such is the force of the escaping mixture of spray and air that the flame may be propelled in any direction, vertically upward or downward, horizontally or slanting, and it takes the direction in which the burner is pointed without the slightest deviation. It will be clear that this flame possesses properties and has a range of adaptability such as are possessed by no other flame; and I propose to illustrate to you in what manner these important properties may be made available for some uses in the arts.

The conditions necessary for the production of light from any hrdrocarbon are the presence of just sufficient air for the combustion of so much of the hydrogen and carbon as shall raise the temperature of the residual hydrocarbon to the point of dissociation, so that carbon may be set free in the flame. The carbon so set free glows and radiates both heat and light, and as it passes up through the flame, it must reach the outer edge at such a temperature as will insure its complete combustion in the free air with which it comes in contact. In coal gas, which is poor in carbon, these conditions may be brought about by merely spreading the gas into a thin film, and igniting it, but in oils or hydrocarbon vapors the amount of oxgen thus supplied is too small, and it is necessary to urge a blast of air against the flame to prevent smoke. But there is a class of oils which contain so very much carbon, and are so easily decomposed, that even the heat of the flame at the wick of a lamp will cause them to deposit carbon, and even the best draught produced by a funnel will not bring sufficient oxygen into contact with their flames to prevent smoke. In the case of such oils, the only method of obtaining smokeless flames is by causing the air to mix with the vapor throughout the flame, and, by preference, using hot air. When this is done, a very thick flame may be used, and this constitutes a most important feature of the new method of producing light, which I am about to explain to you. It has been shown that the carbon set free in a flame is either only a very dense hydrocarbon in the gaseous state, or, what I think much more probable, is carbon in such a moleculary fine state of division that it passes the vibration of light on just as though it were a transparent body, so that the thickness of a flame does not to any extent obstruct the light passing out from its center. Now, provided that this thickness can be obtained without the production of smoke, it is a very important property of a flame, because each particle of carbon travels for a longer time incandescent, and because a large body of flame can reach a higher temperature than a thin body of flame exposed to cold air. Thus we get not only more light emitted by each particle, but that light is emitted for a longer time.

Now, as to the apparatus for bringing about this result. After a long series of experiments, extending over several years, and involving the construction of very varied forms of apparatus, the inquiry has gradually become narrowed down till a form has been reached which gives all the results that could be expected from the crude hydrocarbons with which we deal, and which yields a beautifully clear light from any oil, up to coal tar as thick as treacle, provided it is free from water.

THE LUCIGEN.

The common form of the apparatus, which has been called the lucigen, and which is wrought by compressed air, where the oil is contained in a tank. The supply of compressed air, which should be supplied at a pressure between fifteen and twenty pounds per square inch, is connected by a tap. It has a moisture trap, so that any water which might be in the air tubes cannot pass into the oil. In starting the lamp, a small cock is slightly opened to allow any water to run out. The air passes in by a tube, and has access to the oil tank, where it presses on the surface of the oil and forces it up a central tube to the burner, the flow being controlled by a valve. The supply of air for disintegrating the oil and aiding in combustion passes through a controling valve and up by a side tube to a coil superheater where it circulates round the flame and gets highly heated. This superheater also protects the root of the flame from violent gusts of wind when the lamp is used for engineering operations in the open air. The heated air passes down by a tube and into the burner where it surrounds the oil tube and hence warms the oil before it reaches the burner. This is important, as the crude oil thickens in cold weather and stops the burner. The burner consists of two concentric cones, the inner one containing the oil and the outer the hot air, and these issue as a spray mixture into the combustion chamber. This latter is a most important part of the burner. The chamber has three walls, and the air enters through the perforations at the bottom of the outer wall, passes up between the outer and middle wall, and down between the middle and the inner wall, and below the edge of the latter to the flame. The inner chamber is formed bell-mouthed, in the form of an aspirator, and a powerful draught of air is sucked in and delivered at the root of the flame. The narrow part of the bell-mouthed combustion chamber soon becomes red hot, and as the form of the chamber leaves a larger space here than at any other part of the course, the air moves slowly here, and has time to get thoroughly heated, so that the form of this chamber serves two purposes. The result is a powerful jet of mixed spray, hot air, and hydrocarbon vapor, driven out by compressed hot air, and surrounded by an aspirated sheet of hot air derived from the atmosphere. When this is ignited, it forms a cylinder of flame, tapering at both ends, about three feet long by nine inches in diameter at its widest part, and of an intense whiteness, without the slightest vestige of smoke or smell. The apparatus above described is suitable for open spaces and workshops where a lateral diffusion of the light is wanted, and modifications of the apparatus have been prepared which enable it to be adapted to almost every kind of building and work. When a local light is wanted for illuminating any machine or small space, a smaller apparatus has been constructed to yield from 400 to 800 candle power. This is constructed exactly on the line of the larger lamp. The form of the flame being that of an elongated cylinder causes it to radiadiate much more light, and light of a much more diffusive character, in a direction at right angles at its length, than in any other direction. Hence when required for lighting a large radius on a level with the flame, the vertical flame is used, but when the light is wanted to illuminate the space underneath, a horizontal flame gives much greater duty for the same consumption of oil. As already mentioned, the great pressure at which the lucigen is worked enables the flame to be driven in any direction, and hence a horizontal flame, is as easily obtained as the vertical. This form of flame exposes a large radiated surface to the space underneath, and is the best form for lighting up machines or work on the floor of a shop. This is a new departure in lighting, and is found to give admirable results. Where roofs are very low, or for lighting the bottoms of snips in dock, the horizontal lucigen, is also specially suitable. Sheds only 10 feet high, and with wooden roofs can be efficiently and safely lighted up by means of this horizontal burner; as it casts its flame out at about 20 inches from the ground, the bottom of a ship in dry dock can be beautifully lit up by placing one of these lights on the ground on each side of the ship. Where the apparatus is placed against a wall and intended to light the machinery beneath, while also yielding a light all round, the flame is given an angular direction, so that no shadows are cast underneath.

When a work has to be lit up permanently and the separate oil tanks might be in the way, the oil may be kept in a single large tank, which is placed preferably on the same leval as the lights, and the oil and air are lead separately in tubes to the various burners. The oil in the main tank is placed under the air pressure, and thus acts at the burner just in the same way as it would were it supplied in separate tanks.

Where a large illumination is required to be thrown over an irregular surface, or in a yard where structures are being built, the lucigen is arranged in triplex form, and the illuminating of each burner is considerably increased by the intense heat this arrangement develops. The total light is from 9,000 to 11,000 candle power actual, and it produces an illumination unapproached by any method of producing light hitherto invented, and only to be compared with a conflagration.

When a number of lights are fitted up in a work, the labor of filling the tanks by pumping is considerable if performed by hand. To obviate this a portable tank has been prepared, which is filled with oil and wheeled to a position underneath the tank. A tube is led from the bottom of the portable tank to the lucigen above, and the compressed air is admitted to the top of the portable tank, when the oil is forced up to the tank. In this way the lucigen may be speedily and easily filled.

The size of the flame given by these lamps is so great that the shadows are all nebulous at the edges, and the volume of light, if I may so call it, is so great that the reflection from surrounding objects lights up the shadows, and prevents that blackness of shadow so trouble

some with the electric light. At the same time the flame may be made of any smaller size by simply turning the valves, so as to cut off more or less oil and air.

The flame cannot be blown out by any wind, because while a strong wind may bend the flame, and a hurricane may scatter it, the formation of the combustion chamber keeps the root of the flame thoroughly protected, so that no wind can extinguish it. But it may happen that, in spite of precautions, the crude oil used contains drops of water, derived, perhaps, from imperfectly drained casks or other causes; and as the class of oils used for the lucigen are nearly of the same density as water, such drops do not settle, but pass into the burner with the oil. When this happens a gap is caused in the flame, and it is extinguished. In order to prevent such accidents, an arrangement is used to relight the flame. It consists in an independent supply of oil passing through a connection, and regulated by a small screw valve, passing up by a tube to a burner, which has a wick composed of asbestos and wire. The amount of oil passed is very small, and the heat is so great that most of it is volatilized, and keeps a small gas flame burning, which relights the main flame in cases like those I have stated. In most cases it is never required, but it gives additional security to the constancy of the flame.

There is one use to which I hope to see the lucigen applied, in which this relighting arrangement would be very useful. I hope, before many years elapse, every ship which crosses the great highway of the Atlantic, or makes for our ports through our crowded channels, will carry, instead of the red and green lights so often invisible or deceptive in a slight haze, one or two lucigens, which will light up the ship and the surrounding sea so clearly that the masts, spars, and hull of the vessel will be visible for miles, for it must be remembered that the great flame renders clearly visible surrounding objects, and does not give the blinding glare of the electric light, which renders all but itself invisible, and thus the approach and course of that ship will be as apparent as in broad daylight. Were such an arrangement carried out, the mysterious disappearances of so many fine ships would, I believe, be greatly diminished in number. The relighting arrangement would admit of the use of a push stop valve being applied to the main oil supply, and any one acquainted with the Morse alphabet could telegraph to a passing ship by the dot and dash system, by means of this key stop valve. When the main flame was extinguished for the period of darkness, it would relight itself at the messenger, which is invisible.

From the description of the apparatus already given, it will be seen that a large proportion of the air required to support the combustion of the oil is drawn in by aspiration, so that when steam is used instead of air as the disintegrating medium to form the oil spray, its choking effect on the flame is very small, and the light appears to the eye to be almost as good as when the air is used. When steam is used, however, the apparatus cannot be arranged for the pressure of the steam to drive up the oil, as is the case when air is used, because the steam must not be allowed to come into contact with the oil, as it would destroy it for burning. The steam lamp must therefore be arranged either so that the oil will flow to the burner by gravitation, or that it is forced up to the burner by the pressure of the steam supplied to an extensible chamber contained inside the oil tank. In this case the condensed water formed in the tubes between the boiler and the lamp is led into this chamber, so that it is filled with water backed by steam pressure.

In earlier patents the oil was raised to the burner in steam lamps by suction, the burner being formed like an ejector, and the oil so aspirated was burned with its mixture of steam. The great volume of the latter required to aspirate the oil choked the combustion so much that the flame became yellow, and much oil passed through the flame uncomsumed. This is fatal to any light, because the finely divided creosote floats in the air and causes the eyes to smart, and objects all around get a shower of tarry oil. In the lamp under consideration these troubles are all carefully avoided.

The heat from the lamp may be further utilized to raise steam to disintegrate the oil. It will be apparant that it is impossible to start with steam, as until the flame is started there is no heat by which the steam can be raised. It can be started, therefore, either by a hand-pump or by the following simple contrivance. The water is allowed to run into a tank underneath the ground until it is half full, when the imprisoned air will have acquired a pressure of 15 lbs. on the square inch. The water is now turned on to the extensible water chamber in the tank containing the oil, and the air and oil being now under the proper pressures, the valves are turned on and the lamp lit. In about forty seconds the copper champer is hot enough to produce the steam, and the water is now turned gently on until steam issues freely from a small try-cock at the base of the burner.

As soon as the steam issues dry the cock for the admission of the air is closed, and the lamp will not run perfectly steady as long as the oil lasts.* Of course, as the flame must impinge on the copper, this form of lamp must be inclosed in a lantern, to protect it from the wind.

Where a supply of water at a reasonable pressure can be had, the compressed air may be supplied from a pump driven by a small water motor. Apparatus of this kind has been used with great success.

Where, for outside purposes or for fixed workshop purposes, regulation of the size of the lucigen flame is not required, the earlier forms of the apparatus may be used. In this form the air supply with moisture trap is arranged much the same, but the air passes by an India rubber tube to the vertical superheater, which is a double tube. The air passes up the inner tube and returns down the outer tube, which is of copper, and through by the union to the burner. The tube, which supports the burner, is also double, the inner tube passing right to the bottom of the tank, and being thus immersed in the oil.

The compressed air passes down the outer tube, and pressing on the surface of the oil in the tank, drives it up the inner tube to the burner. The regulation is performed by turning the burner, which has a cone ground accurately to fit the cone of the inner oil tube. By this means the air and oil are regulated, because if the burner is screwed up the air gets freely to the outer cone and presses back the oil, while, if it is screwed down, the air is checked and the oil comes more freely.

When the flame has been properly regulated, a jamb nut is screwed hard against the burner, which is thus held firmly at the required regulation. The burner in this case is not of the hot air aspirating pattern, but simply a closed burner.

A form of lucigen is also arranged for a break-down plant, with a portable compressor and receiver, which can be wrought by two men. This form of the apparatus was largely used in the recent mobilization experiments by the French government, as it was found to be much superior to electric lighting for training horses and drilling troops at night.

The characteristic of all these lamps is that they yield an intense white flame of about 2,500 actual candle power with a consumption of two gallons of crude oil per hour. I say actual candle power measured by an ordinary gas tester's photometer, because we hear so much of so many candle power "nominal" in the case of electric arc lights, that I think, once for all, illuminating power should be honestly stated by the best standard known. In trying the lucigen flame near a group of four electric arc lamps of 2,000 candle power "nominal" each, it was found, to my great astonishment, that the lucigen was much brighter than the four arc lamps put together.

As it was yielding about 2,500 actual candle power, it follows that each 2,000 "nominal" electric arc was really under 600 candle power. Such "nominalness" is rather striking. Besides its great diffusive power and broad glow of light, the lucigen has many advantages, which have led to its adoption in all the important engineering and ship building centers in Britain. The first is its low cost, being only, compared light for light, one-tenth that of gas, and hence one-twentieth of electric light, if the latter is applied so that work can be done, because the electric arc is useless as an artisan's light. Electricity, to be of use for detail work, must be applied in the incandescent lamp form.

The second advantage is its extreme simplicity. Any one can manage and regulate the light, and any failure must arise from some easily discoverable cause. Such has been its success in a short time, that already the most extensive engineering works in the world are laying down tubing for the compressed air to light their entire works, while their expensive electric lighting plant will be disposed of in the way which will entail the least loss. Railway companies have laid down this plant for lighting their shunting operations at night, and by leading both oil and air, under pressure, in tubes to the burner fixed to a post, the light may be produced at long distances from the sources of oil and air. Already the system has been extended half a mile from the compression pumps, and it will soon be extended to over a mile. This system is thoroughly suitable for lighting cities, the motive power being small steam or gas engines at suitable intervals.

This brings me to the second part of my subject—the production of heat from oil.

In the first place, I may remark that we have been so long accustomed to use coal for producing heat, that the methods hitherto followed in regard to oil have been simply slight alterations in the forms of furnace already in use for coal. It will be plain, however, to anyone that the two cases are entirely different, and inasmuch as the oil leaves no ash, requires no supporting bars, and can be introduced anywhere in the furnace, I think that the old forms of furnaces are bound to be entirely abandoned before really good results can be obtained from oil. Therefore the apparatus I am about to describe to you is, I may say, merely the results of the first crude trials in the direction of the proper utilization of oil for producing heat, and although highly successful as far as yet applied, I feel that for larger operations much better and more economical furnaces will yet be invented.

The first point which strikes one about the use of oil for heating is that there are many operations for which small isolated sources of heat are required, such as the multitudinous articles manufactured out of bar and sheet iron and steel, which require to stamped, punched or shaped while still hot. For all these purposes the oil furnace is especially suitable, and as each furnace must be constructed for the special purpose to which it is to be applied, I shall describe one form as typical of the method, the other forms being merely varieties.

The form I shall describe is that used for heating rivets for modern riveting machines. This furnace being specially designed for the economical and quick application of heat, has been called the pyrigen, or fire producer.

In my earlier experiments, it was attempted to apply the principles which Siemens laid down for coal furnaces, i. e., regenerative action in the furnace, and allowing the flame to do all its work by radiation, touching the brick as little as possible. A furnace constructed on these principles acted very fairly, but on comparing the heat obtained with that produced by merely playing the flame into a confined brick space, where it got churned about, it was seen that to this sort of fuel Siemens' rules for the economical production of heat from coal did not apply. He taught that whenever the flame touched brick, it underwent dissociation, and the temperature attainable was very much lowered. Now, after a long series of experiments, during which many different forms of furnaces have been constructed, the conclusionthas been irrisistibly forced upon me that in the kind of flame with which we are dealing, the more the flame touches the brick the higher a temperature we get, and my whole ingenuity is spent in doing absolutely the reverse of what Siemens advised, namely, in devising furnaces in which the flame is baffled by the form of the brickwork, and churned about, and, as it were, rubbed against the brick as much as possible. It is found that a furnace constructed after this plan may be maintained at the same temperature as a Siemens' furnace of the same size, with a combustion of only one-fourth of the amount of oil.

The results obtained by this furnace are somewhat remarkable. On first turning on the oil, the flame is simply like the lucigen, and the rivets may at once be heated by heaping them up in front of the flame. But as the furnace heats up the flame becomes longer, and, if the flow of oil be not decreased, it would pass round into the chimney and produce smoke. As the oil supply is diminished, the flame becomes more and more transparent, till a point is reached when "flameless combustion" is obtained, and the inside walls of the furnace simply glow with a white heat without any visible flame. This is the most economical form of furnace heat, as the gases only combine when touching the solid surface (and yet do not wear that surface like an impinging flame), and hence the furnace glows with an intense quiet heat, which quickly raises to a high temperature any articles exposed on its floor.

The atmosphere to which the articles are exposed in this furnace is one which, from its peculiar character, is well calculated to preserve the articles from oxidation or other deterioration. It contains no sulphur, no dust, and no free oxygen, as the oxygen is all required to combine with the hydrocarbon of the oil, and hence iron or steel may lay there for hours without being in any way destroyed.

In all other operations requiring quick heating with purity of atmosphere the pyrigen flame is peculiarly well adapted, and the following may be mentioned as some of its various uses:

It is specially well adapted for heating iron, for making bolts, rivets, and nuts, and has many advantages over the ordinary rivet iron furnace. There is no loss from destruction of fire bars or bricks, and no dust and ashes while the cost of oil required for combustion is not one-third that of coal, the iron at the same time being maintained in its pure condition, and not burned or sulphurized as when coal is used.

The increasing use of fixed and portable riveting machines in ship building, bridge building, and other engineering operations, calls for an economical and systematic method of heating rivets as a matter of the highest importance. The pyrigen is admirable adapted for this purpose, as by its use the rivets can be regularly supplied in any quantity to the machines at the required temperature. The furnace can be made ready for use in ten minutes, and the temperature kept steady and under perfect control, while the iron is in no way injured, and the rivets are not subject to the usual percentage of loss which takes place when coal is used for heating. Further, the pyrigen, being portable, can be readily shifted according to the requirements of the work—all that is required being a connection to a supply of compressed air.

Another useful application is for heating the steel or iron tires for shrinking on to the wheels of railway carriages or wagons and ordinary coaches, the labor and expense of the usual methods of heating being superseded at much less cost, as the pyrigen can be got ready for heating in a few minutes and the flame turned off when not wanted.

It can also be effectively and economically adapted for angle iron and plate reheating as employed by boiler and bridge makers, and is greatly superior to the ordinary furnaces, as by its use the heat can be regulated at pleasure and the iron kept clean and free from scales.

The horizontal form of pyrigen is also suitable for a great variety of other heating purposes, as metals treated in this furnace can be raised in a very short time to a welding heat, while their purity and tensile strength are not in the least degree injured, as the atmosphere is entirely free from either sulphur or phosphorus, and no carbon is present in any form which would enable it to combine with or deteriorate the iron.

This form of furnace is also well adapted for cupelling and other special metallurgical operations where a high temperature and purity of atmosphere are required. The sharpness of the heat of this little furnace may be judged from the fact that a cold brass casting of several pounds weight thrown on the hearth began to melt in 45 seconds, and was completely liquefied in 55 seconds.

The vertical form of furnace is for heating crucibles, as in brass founding, fluxing, bullion smelting, etc. and conducting other operations where it is desirable to surround the object with flame either of an oxidizing or a reducing character. The capabilities of such a furnace may be learned from a trial of brass melting in a crucible. The crucible, 8 inches by 12 inches, was put in cold, filled with broken brass castings, and the whole brass was liquid, and, in fact, much too hot, in twenty minutes. Of course such rapid heating cracked the crucible. Starting with the crucible of the same size hot, the brass was liquid and ready for pouring in four minutes and a half. This constitutes a most important advantage of the pyrigen over heating by coal or coke, as by merely turning a tap the flame may be changed in an instant from oxidizing to reducing, or vice versa, while the temperature can be raised to any given point, and be maintained there perfectly steady for any length of time.

This absolute steadiness with which any given temperature may be maintained renders the pyrigen very valuable in such operations as Japanning, vulcanizing, annealing, etc., all the arrangements being of the simplest nature.

As in the case of the lucigen, it can be wrought by compressed air or steam, the best and most economical results being obtained by the use of the former; but where compressed air cannot be conveniently had, steam may be used, it being superheated by passing through the flue before reaching the burner.

Any kind of crude oil, creosote oil, tar oil, or gas tar, may be used in the pyrigen, the oil tank and service pipe being so arranged that the oil or tar is gently heated before combustion.

The pyrigen burns without smoke or smell, and as it gives off no irritant gases, it can be used inside an ordinary engineering shop without the slightest inconvenience, while the burner and tank are constructed similarly to the lucigen, and may be used for lighting the workshop when not in use for the furnace.

Before closing, I may briefly refer to the use to which oil may be put when the vast stores have been opened, and the distribution effected in an economical way. At present the limited quantity at our disposal renders the use of oil for steam raising for ordinary commercial purposes quite out of the question, because the amount required for even a few Atlantic liners would exhaust the supply, and raise the price beyond the commercial limit.

But there are special circumstances in which it is desirable to raise steam with as small a weight of fuel as possible. The modern torpedo boat or fast cruisers are vessels in which the saving of weight in the fuel used is of far more importance than the price of the fuel. This consideration caused me to conduct a series of experiments on a land boiler of locomotive type, with the unexpected result that 6 cwt. of oil fuel raised as much steam as had been raised by one ton of small coal. This unexpected result, showing an efficiency of three times that of coal, caused me to look into the conditions under which heat is obtained from the two kinds of fuel.

In the case of coal the combustion is irregular, and the average temperature of the gases passing up from the fire may not be over 1,000 deg. C., while, owing to the constitution of a coal fire, and the easy formation of smoke, large quantities of air require to be heated which take no part in the combuerion of fuel, in order to provide an excess of oxygen to consume the smoke. In the case of oil as consumed with the new burner, the conbustion is quick and perfectly regular, and the exact amount of air required for combustion is heated, so that there is no waste, while the average temperature may be 1,000 deg. C. higher than in the case of coal, and hence the available heat immensely greater. Hence, it is not a question of the amount of energy in oil as compared chemically with coal, as they are nearly equal, but is a question of the amount of available energy to be had from the fuel, an amount which depends entirely on the conditions of combustion of the fuel, and, in this respect, oil is greatly superior to coal.

The "available heat" is the amount of heat obsorbed by the boiler and communicated to the water, and is represented by the difference in temperature between the gases immediately over the burning fuel and that at which they pass away to the chimney. As the latter temperature is practically the same with equal volume passing away, but is lower with a smaller volume, it is plain that the higher the initial temperature of the gases, and the smaller their volume, the greater is the duty of the fuel.

In oil fuel, as dealt with by the new burner, there is a very high initial temperature, and the gases are reduced to the minimum, which will carry on complete combustion, so that the conditions are secured for a very high state of efficiency.

I have here roughly sketched types of the two important uses to which the immense reservoirs of oil in the earth's crust may be applied, and, no doubt, when these stores are properly worked, and the contents distributed over the globe as efficiently as wheat is at present distributed to hungry nations, the light and heat of the future will mainly be obtained from oil.

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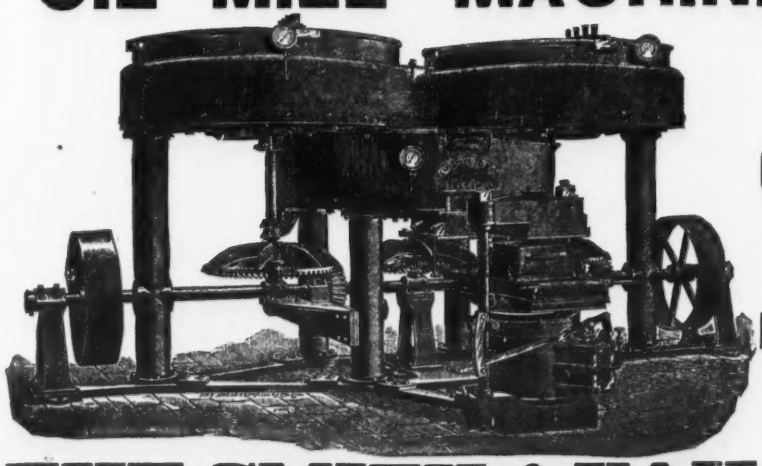

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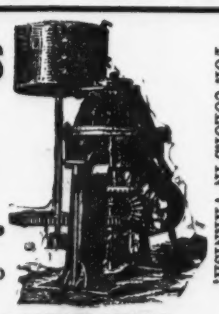

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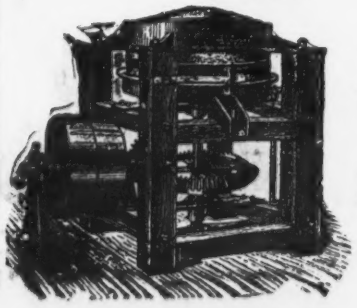

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PAINT MARKET.

Note—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*

The prices current will be found on page 49.

TUESDAY EVENING, January 17, 1888.

White Lead, Zinc Etc.

The pig lead market has been almost featureless during the past week so far as local developments are concerned. Consumers have in a quiet way endeavored to secure some stock for this immediate requirements and have taken altogether some 500 tons for which they paid 4 75@4 80c. There are very few sellers as most of the available supply is in the hands of operators who are not disposed to let go of it at present prices. Through Messrs. Everett & Post of Chicago we learn that the situation in the West last week was devoid of interest. Messrs. John Wahl & Co., of St. Louis, said in their letter of the 14th inst. that developments during the past week demonstrate clearly that the speculative peg has been withdrawn and that pig lead is once more allowed to take its natural course. In brief, says our correspondent, the trade in lead seems to have lost every semblance of its former vitality and to have fallen into a rut in which it must remain until relieved by factors not at all apparent at the moment.

The unsettled condition of the pig lead market and the increasing competition among corroders as the opening of the spring season approaches exert a depressing influence upon the white lead market. Prices have been gradually seeking a lower level and the advance slowly made during the closing weeks of the year has been almost if not entirely lost within a comparatively few days. While the lowest price we hear named for city brands is 6¼c less 2¼ per cent for cash, to the very largest buyers, Western lead has been sold in comparatively small quantities at 6c net, and possibly less. While the price first named above is quoted by some city corrodors, it is not made by all, as some of the best known brands are quoted at 7c, less 2¼ per cent. for cash, with the special discount of 2 per cent. on 5 ton purchases, and 4 per cent. on 10 tons bought and paid for at one time, and the allowance of a rebate of ¼c per lb to buyers of more than 5 tons during the year.

American oxide of zinc has been wanted to a moderate extent in a jobbing way, while no change in the ruling quotations of a week ago are noted. We quote domestic at 4¼ @4¾c as to quality. French zincs have been stationary, the following continuing to rule: 6¾c for dry Antwerp red seal in bbls of 220¼ lbs; Paris red seal 6⅞c, and 7¾c for dry Paris green seal. Discounts on French are as follows: To buyers of 10 bbl lots of one or assorted grades 1 per cent, 25 bbls 2 per cent, and 50 bbls 4 per cent. No discount is allowed on less than 10-bbl lots, and discounts include brokerage.

Dry Colors.

REDS

There has been a somewhat better feeling in the market for paints during the past week, and a very fair jobbing business has been done. Dealers now hope that the 15th of the month having passed, the market will show a decided improvement, and look forward to a good, healthy trade. English venetian reds have received fair attention, and sales in a jobbing way have been consummated at unchanged figures, as follows: $1 45@1 50 for special brands in large lots and the same range is quoted for other makes according to brand and quality for smaller quantities. American has been in fair request with no special features in the trading worthy of mention, and values are unchanged at the following rates: 90c@$1 05, while special brands are obtainable at $1 20@35, according to quality and make.

Carmine—Stocks of this article have moved fairly well, though no special trading can be reported. Our figures of a week ago still rule, they being as follows: $3 15 for round lots, and $3 25@3 50 for smaller parcels, according to style of packing and quantity.

Quicksilver vermilion—There is nothing of particular importance doing in this article. A fair jobbing demand has existed, which has been supplied by dealers at the following unchanged prices: 70c in bulk (kegs of 100 lbs or over), and bags (30 or 50 lbs) 71c, with a corresponding advance for smaller quantities.

Red Lead and Litharge—There have been a few transactions in these articles but no special sales. The market continues firm, with values at the following rates: red lead, 6¼@6½c; litharge, 6@6½c.

Cobalt Oxide—There has been no material change in the aspect of this market. A few contracts have been made, but they are minor ones, and no transactions of any importance have taken place. The market is firm at the following quotations: $2 50 for best German, and $2 00 for black.

Orange Mineral—There are positively no new features to this market. There having been no arrivals, the spot stocks are very limited, and pretty much all that will arrive has been placed. The following are the unchanged figures: English 8½@9c, French, 8⅞@9⅝c, German 8½@9c, with the market continuing exceedingly firm at these prices.

BLUES

We are unable to note any interesting items in the market for blue pigment. A fair business, characterizes the weeks trading, and no special transactions are reported. There has not been that improvement that dealers had looked for, after the middle of the month, but they do not despair, and look forward to a decided improvement during the coming week. The market continues very firm, with the following prices quoted: 2.@30c for Prussian, as to make, grade and quality, and 48½@50c for Chinese, according to size of order.

YELLOWS

There is very little to note in this market. N M B Ochres have not moved, and the same may be said for French washed. As has been stated in previous issues, all arrivals have been placed, and the market is exceedingly firm. The trading in American has been fair with nothing of interest to note, and sales of 480 bbls are reported at prices within the range of our former quotations.

GREENS

The trading in the market for green pigments has been fairly active during the week under review, and dealers report the week's business as reasonably satisfactory. There have been no changes in the position of paris green. The manufacturers have held no further meetings, and orders are being booked, though no price is named.

Miscellaneous.

Sulphate of Barytes—There has been a reasonably satisfactory jobbing business doing since our last report. Several vessels which are due are still out, owing to the heavy

TUSCAN RED.

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NEW TUSCAN RED

This is the finest, most brilliant and most permanent Tuscan Red that is to-day offered to the trade, and is manufactured solely by Harrison Bros. & Co., who are the only manufacturers of Tuscan Red in the United States. Any other Tuscan Red approaching this in brilliancy is artificially colored with anilines, from which this New Tuscan Red is absolutely free. Its permanence is so great it will stand a temperature of nearly 350 deg. F. without being seriously affected in color; at 300 deg. it is not at all affected; ordinary Tuscan Reds will commence to change color at 125 deg.

It is more permanent in sunlight than many mineral colors, and it is unhesitatingly offered as an exceptionally fine pigment for car and wagon painting, house painting, wall painting, and all uses of the painter and decorative artist. It is prepared and sold in distemper, ground in oil and also ground for the uses of the coach painter.

Note particularly that the new red is labelled "New Tuscan Red." That which is labelled simply "Tuscan Red" is the old style.

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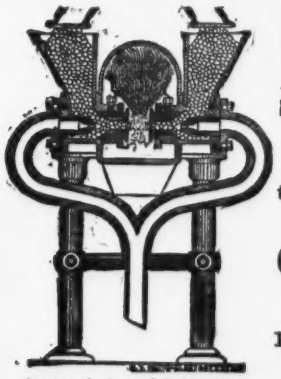

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weather. Prices have not fluctuated, the following continuing to rule: Special brands of imported $2 50, best No. 1, $17 50@18 50, according to quantity, best grades of off color, $15; No. 2, $14; No. 3, $12 50.

Chalk has been rather quiet. We hear of no cargoes offering, freights being high and vessels scarce. A few transactions have been made in a jobbing way, but beyond this, nothing can be reported. Stocks may be obtained to-day at from $2 50@2 60.

China Clay—There has been a very fair business doing in this article, and all grades have felt the jobbing demand which has existed. Old figures have ruled, no changes being noted. American has continued to sell in jobbing quantities, with the market steady at $11 50@12.

Talc has only been moderately active, the transactions being somewhat limited. There have been no changes in the ruling figures, supplies being obtainable at from ¾@1¼c as to quality.

Terra Alba—There has been but little doing in this article during the past week. The inquiries have been for small parcels entirely, and have been supplied by dealers at the following unchanged rates: Best imported 70c per 100 lbs ex vessel, and 75c per 100 lbs ex store for ordinary lots.

Whiting has continued in good request, with no special features evident, stocks as soon as manufactured being taken up, in a matter of fact way. There have been no changes in the current quotations, 45@50c being quoted for common and 60@65c for gilders'.

Clues.

A very fair degree of activity for this season of the year, is shown by the trading, and there is a disposition to hold prices with some firmness. The very large importations are the only source of uneasiness and if the firm prices on the other side are succeeded, as is expected, by an advance, very active times are looked for here.

Glass.

WINDOW GLASS

The condition of affairs in the window glass trade is much the same as it has been for several weeks past. There is a good demand for American glass, but the small stock causes some difficulty in filling orders promptly. The market is very firm, the discounts remaining 70 and 10 per cent on single and 70, 10 and 5 per cent on double. Reports from all the centers indicate a good trade at firmly maintained prices. The National Association of Window Glass Manufacturers meets to-morrow in Washington. It is believed that a discussion of the tariff question will occupy a large part of the time of the convention, and it is probable that the example of the West in advancing prices will be followed.

In French glass business appears to be good for the season, and prices have a firm support. As some differences of opinion have arisen regarding the details of the dealers' and importers' agreements, to which reference has already been made in these columns, the matter is still in abeyance, and we are compelled to delay publishing the particulars promised for this issue until a later date.

PLATE GLASS.

The demand for plate glass continues good, but the market is still unsettled, and it is difficult to quote. The discount is nominally 50 and 10 per cent, but in some cases 60 per cent off is allowed. We understand that a movement is on foot to reorganize the importers' combination, but nothing definite regarding the plans of those who are working at the matter can be learned.

Picric Acid as an Explosive.

At the sitting of the French Academy of the Sciences held on December 12, Professor Berthelot read a paper on the various modes of explosive decomp sition of picric acid. Prefacing with an exposition of the general belief in the explosive property of the chemical, and alluding to Colonel Majendie's report on an explosion of recent occurrence in England, he related the following experiments: When a certain quantity of picric acid is heated in an open flask or capsule it first melts, then volatilizes, giving out fumes which burn with a smoky flame, but no explosion takes place. But when a test-tube, about one inch in diameter, is heated over a gas jet so as to produce a visible red, but without melting the glass or deforming the tube, on dropping into it some crystals of acid weighing only a few milligrams a sharp detonation occurs, with a bright white light and characteristic noise. When the experiment is performed in nitrogen gas, a few flakes only of carbon are deposited; in ordinary air the result is the same, but no carbon is left. On increasing the quantity of picric acid, without, however, exceeding a few centigrams, the addition may cool the bottom of the tube sufficiently to prevent immediate detonation, but the chemical is at once volatilized, and soon an explosion with flame occurs, occupying a great part of the tube. This explosion is not so sharp as the more local detonation, and more carbon is apparently deposited. An explosion of the nature may be produced with a few milligrams of material by using a glass tube coated with the carbon of a previous explosion. With a decigram of acid, and a new tube, the action will be slower still, yet a series of detonations with red flame will be observed, the vapors will catch fire at the mouth of the. Finally, with larger quantities the

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RED OXIDE OF IRON.

Superior in Body, Strength and Fine Grinding. Contains 65 per cent. Iron Oxide. Free from Sulphur or other injurious matter. Very durable. An excellent Oxide *in every respect*, and one that

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Chrome Yellow, ALL QUALITIES
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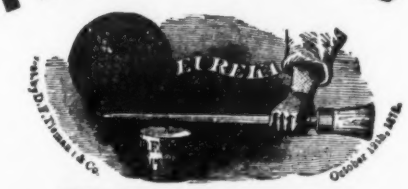

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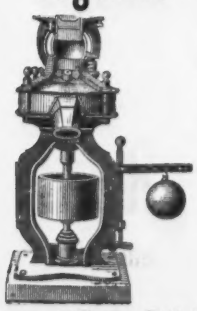

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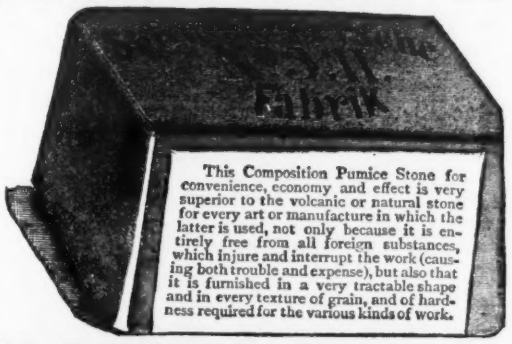
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acid is decomposed, there being abundant fumes and partial volatilization, but without deflagration. Other nitrogenized bodies, less oxygenated than picric acid, such as nitro- and bi-nitrobenzine, nitronaphthalines, etc., were experimented with, and afforded concordant results, leading to the conclusion that the mode of decomposition of all these nitrated bodies depends on the initial decomposition temperature. Respecting picric acid more especially, M. Berthelot's conclusions are as follows: "Should a nitro-compound, such as picric acid, while burning in the air in large masses, happen to heat the sides of the containing enclosure to a degree sufficient to induce incipient deflagration, the deflagration might contribute to further increase the temperature of the enclosure, and the phenomenon might occasionally be transformed into a detonation. It would even suffice that the detonation should occur in an isolated point, either during a fire, or owing to the local overheating of a boiler or apparatus, to enable it to originate the explosive wave and propagate itself by influence throughout the whole mass, causing a general explosion."

The Typography and Geology of Middle Tennessee as to Natural Gas.

(Continued from last week.)

The region of this oil in Tennessee is in front of the Cumberland table land, on the Rim area. The wells are mostly located in river and creek valleys. The oil-producing rock is the Hudson river limestone. Wells on Spring creek, in Overton county, are shallow, most of them not reaching 100 feet in depth. But few have passed through the black shale to the Hudson limestone. In most of them the oil is met with before reaching the black shale, it having escaped from below and found a suitable "sand" in the silicious and cherty material above. There are other points connected with this oil region which might be presented, but for the present we must pass on.

As a rule, more or less gas was met with in drilling these wells, but circumstances of time and place were not such as to cause it to be observed with any special care or interest. The drillers were after oil. It is evident that there has been no show of it comparable to what is seen in the great gas-producing regions of Pennsylvania and Ohio. There remains, however, much to be done in this region, and when the desirable railroad facilities are supplied our geological friends may be unnerved by "surprises" here.

In several of the counties along the western base of the Cumberland table land, as in White and Warren, moderate quantities of gas have been encountered in wells drilled for salt water or petroleum. Some of them have been famous for a time as burning wells.

West of Nashville, or rather of the basin in the Rim area, the creek valleys are geologically much like those of Overton county. They differ, however, in having a less elevation above the sea by several hundred feet, and some of them also in having an outcrop of Niagara limestone. The valley of Jones' creek in Dickson county is one of them. The oil found here comes from below the black shales. Its source is doubtless the Hudson River rocks. The gas from this well does not appear to have attracted any special attention.

Nearer Nashville, at about the western edge of the central basin, a well has within a few months been drilled, starting in the Niagara and descending into the Hudson and Trenton limestones all to a depth of 1,560 feet. At a depth of 200 feet in the Hudson River rock gas was encountered which blazed up four or five feet when ignited. Below this no more gas was met with. Two wells were bored during the last season six and eight miles respectively from Chattanooga with no important results. A little gas was met with in one of them, which when fired, blazed up for a few minutes.

Two conclusions follow from what has been stated: 1st. The gas so far obtained in Tennessee has no practical value, and 2d. That the gas and oil, such as we have, come from the Hudson River and Trenton limestones.—*Am. Manufacturer.*

Baltimore Imports.

Comparative statement of the Imports at the port of Baltimore commencing January 1st 1888 and 1887.

Articles:	This week.	Previously.	Same time '86
Agricultural salt, tons.	1000	....	....
Cement, casks	3000	....	....
Brims'ne & Sulph'r tns	...	....	....
Guano, tons.....	.. .	....	...
Nitrate of Soda, bgs...	....	...	....
Spirits Turp, bbls.....	239	....	319
Rosin, bbls.....	1540	....	4056
Tar, bbls.....	535	...	345

Baltimore Exports.

Principal articles exported from Baltimore to foreign countries since 1st of January, 1888, and compared with same time 1887.

	This week	Previously.	Same time '87
Bark Quercitron bgs....	....	....	1368
Spirits Turpentine, gals.	....	....	1000
R sin, bbls	200	..	200
Cake, pkgs.....	1530	....	5 08
Petroleum, gls...	....	....	393993
Tallow, lbs ...	....	....	80600

INGERSOLL SOAP WORKS

Manufacturers of

Laundry and Toilet Soaps.

Office 64 Fulton St., New York.

WANTED.

A thoroughly reliable and well established Paint Commission House to handle a brand of Dark Maroon Metallic Paint, of uniform color, excellent body, and large covering capacity.

This paint is adapted to all kinds of in-door and out-door decoration. It is equally available for the finest panel work on Palace Cars or Carriages, as well as for Wood and Metal work of every description, and can be sold at a price which will insure its extensive use. The output of the Works amounts to several hundred tons per annum.

None but parties of the highest responsibility will be considered; and to such the exclusive sale of this brand will be committed. Address LOCK BOX No. 3, Wilmington, Del

TANKS and PRESSES

For Sale—Lot of **IRON TANKS,** Capacity 600 to 4,000 gallons, of various shapes.

WOODEN WATER TANKS—25,000 to 70,000 gallons capacity.

9 DOUBLE HYDRAULIC SLACK PRESSES—All complete, suitable for pressing all Animal and Fatty Oils.

1 HYDRAULIC PRESS—Suitable for Linseed or Cottonseed nearly new, very heavy and superior.

Also large lot of Pipe and Fittings from 4 inch down. All for sale at low price.

Downer Kerosene Oil Co.,

122 W. First St., So. BOSTON,

Office 104 Water St., Boston, Mass.

TESTIMONIAL.

PHILADELPHIA, PA., Nov. 5, 1887.
HARRISON BROS. & CO.
GRAY'S FERRY CHEMICAL WORKS.

Mr. John F. Riday, New York:

DEAR SIR:—In answer to your inquiry regarding Ajax Metal Co. Acid Proof Metal, I have to state that we have used this Metal for acid cocks, throughout the works and give it full endorsement, before adopting the same for this purpose, we had it tried in the Laboratory and found that the loss after treating the same with acids of various strengths, hot and cold was very small. The largest loss is in the beginning of the treatment: afterwards a coating of oxide which forms on the metal protects the same from further corrosions, so that the loss is very small by further immersions. *We* discarded stoneware spiggots entirely and substituted the *Acid Proof Ajax Metal* instead. Respectfully yours,

C. SEMPER, Gen. Supt. of Gray's Ferry Chemical Works.

AJAX ANTI ACID AND ALKALI METAL

IS MANUFACTURED ONLY BY

THE AJAX METAL CO., Philadelphia, Pa.

JOHN GILL WILLITS, President. JOHN GILL, Jr., Treasurer.

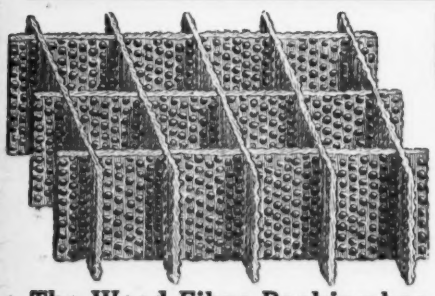
NEW YORK OIL CO.

REPRESENTING

Quaker City Oil Company and other Independent Refiners of Petroleum and also Manufacturers of Oils of All Kinds, Wax, Chemicals, &c.

Offices: NEW YORK, 125 Maiden Lane PHILADELPHIA, 9 N. Front St.

Correspondence Solicited with Refiners and Manufacturers having goods to offer for Export or Home Trade and Jobbers.



U. S. BottlePacking Co.

Sole Manufacturers under U. S. Patents of the

ELASTIC WOOD FIBRE PAPER

For Packing Bottled Merchandise, Tiles, and all Fragile Articles.

The Wood Fibre Packing has been used by someof the largest shippers in the U. S. Sent all over the world and not a single complaint of breakage has been reported. It is absolutely safe.

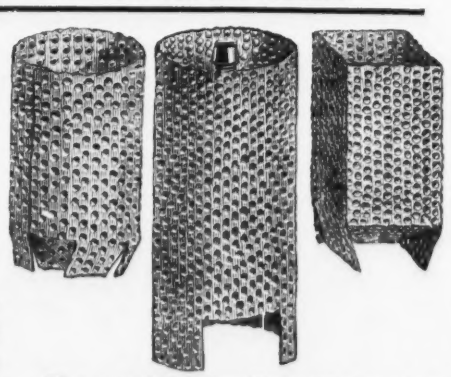
Samples and prices furnished upon application.

Put up in any shape desired by the packer or sold by the yard or roll. In plain cylinder with a sheet for the top and bottom of the box. In sewed wrappers with flexible bottoms. In cartons. In rack cases to fit a packing box. In self-sealing wrappers, neatly folded in a sheet or wrapping paper for single packages.

All correspondence address to

56 & 58 Warren St., NEW YORK.

BOSTON OFFICE: 99 Milk Street. CINCINNATI OFFICE: 165 Walnut Ave.



The special attention of Druggists and all packers of bottled goods and fragile articles is called to this packing.

It is neat, clean, compact, and saves from 30 to 50 per cent on cost of freight.

Sample cases fitted up without expense to owners.

ESTABLISHED 1832 TRADE VALENTINE'S MARK 1882 INCORPORATED

Valentine & Company NEW YORK

MANUFACTURERS OF

· CHICAGO · · BOSTON · · PARIS ·

VARNISHES & COLORS

COACH & CAR

SOUTHERN COMPANY TRADE MARK WARRANTED STRICTLY PURE WHITE LEAD IN OIL OF ST. LOUIS & CHICAGO, MO.

Southern White Lead Co.,

Manufacturers of Strictly Pure

White Lead, Red Lead and Litharge,

ST. LOUIS AND CHICACO

FACTORY IN ST. LOUIS, Corner Main and Lombard Sts.

FACTORY IN CHICAGO, Corner 16th & Brown Sts.

McBIRNEY & JOHNSTON CO. STRICTLY PURE WHITE LEAD WHITE LEAD CHICAGO

We desire to call attention to the fact that the Southern White Lead Co. now has two factories, one in St. Louis and the other in Chicago.

The "Southern Company" Brand of Strictly Pure White Lead will be manufactured in St. Louis and Chicago by the same Chemical and Mechanical processes, both factories being under the same careful and experienced superintendence, and are fully equipped with the most modern improvements and appliances for the economical and perfect manufacture of the product. Great care is taken in the selection of the Pig Lead and Oil, also in corroding, washing floating, drying and grinding the product, so that it is of a uniform color, body and texture, and as twenty years' experience has shown, pleases in every respect the most experienced and particular painters. We call your special attention to our Brands at the head of this sheet.

Every package of our Lead bears a guarantee of its absolute purity, printed in crescent shape. *And as the Company manufactures only strictly Pure Lead*, parties buying White Lead branded "Southern Company" *can make no mistake*, and are *absolutely sure* of obtaining a *perfectly pure article.*

The Company as successors to the business of the McBirney & Johnston White Lead Company of Chicago, will also manufacture and continue to sell the "*McBirney & Johnston Co.*" *Brand of Strictly Pure White Lead*, which has been largely sold and has acquired a fine reputation.

As St. Louis and Chicago are the two best distributing points for the South, West and North-West, we can quickly and economically reach all the Trade in these sections, shipping from either city as may be most convenient in time, and cheapest in freight rates to the buyer.

We hope to merit a continuance of the patronage and good will of the dealers in and consumers of White Lead, which we have enjoyed so long.

SOUTHERN WHITE LEAD CO., Cor. Main & Lombard Sts., St. Louis, Mo. SOUTHERN WHITE LEAD CO., Cor. 16th & Brown Sts., Chicago, Ills

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Acme White Lead and Color Works

DRY COLOR MAKERS AND PAINT MANUFACTRUERS,

DETROIT, · · · · · MICHIGAN.

Chinese Blue.	Chrome Yellows.	Vermilion.
Prussian Blue.	Chrome Greens.	Lakes.
Soluble Blue.	Paris Green.	Wine Colors.

Equal in Every Respect to the Finest Imported French Pigments.

Quality Absolutely Unsurpassed.

CORRESPONDENCE SOLICITED. **SAMPLES ON APPLICATION.**

THE GOVERNMENT WATERPROOF PAINT CO.

MANUFACTURERS OF

GOVERNMENT WATERPROOF PAINTS,

BELT DRESSING AND CEMENT.

This Paint retains a beautiful golss without a particle of Varnish in it, and will stay on Spruce where all other known paints fail to stay but a short time.

It contains a pigment which renders it thoroughly **WATERPROOF** and unlike all other known paints possesses in a remarkable degree immunity from harm when subjected to attack from ammonial vapors Our Belt Dressing and Cement are unequalled.

Office, 167 Milk Street, BOSTON, MASS.

Factory at MALDEN, MASS.

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MANUFACTURED BY DE GOLYER & BRO. DE GOLYER VARNISHES CHICAGO AND TROY N.Y.

VARNISH MAKERS. PRATT & LAMBERT PRATT'S LIQUID DRYER 47 JOHN ST. NEW YORK

Established 1836.

JOHN J. BUDD,

MANUFACTURER OF

WHITING, FRESCO, PUTTY, &c.

149 Bank Street, New York City.

For 1st Coat, one pint of water to a Pound.

For Whitening and Coloring Walls, Ceilings, etc

Mix with hot water and use when cool.

MANUFACTURER

JOHN J. BUDD, FRESCO 149 BANK ST. N.Y.

Registered TRADE MARK.

For 2d Coat, one pint and a half of water to a pound.

Correspondence Solicited.

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MANUFACTURERS OF

Japan, Japanned Tin and Iron Plate,

FOR SIGNS.

WOOD AND METAL PANELS,

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FIRST QUALITY

Pure Sulphate Barytes.

Would call the attention of Buyers to the SUPERIOR QUALITY OF OUR MANUFACTURE.

WM. B. SCAIFE & SONS,

OFFICE, No. 119 FIRST AVE.,

PITTSBURGH, PA.

SOLE MANUFACTURERS OF

Elevator Buckets

BONE BLACK

FOR FILTERING AND MANUFACTURING PURPOSES.

Size No. 1. For Glucose and Grape Sugar Refineries.
Size No. 2. For Cane Sugar Refineries.
Size No. 3. For Oil and Paraffine Refineries.
Size No. 5. For Beet Sugar and Sorghum Refineries
Ivory Black, for the Paint and Blacking Trade

Orders Solicited. Samples and Prices on Application

ADDRESS,

Michigan Carbon Works

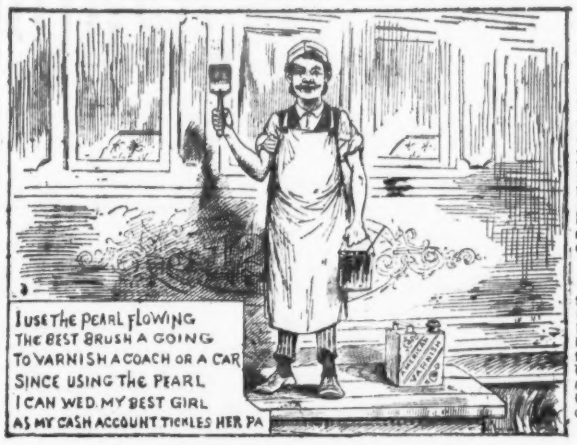
DETROIT, MICH.

WHEN BUYING

BRUSHES

BUY THOSE MANUFACTURED BY

JOHN L. WHITING & SON.


I USE THE PEARL FLOWING
THE BEST BRUSH A GOING
TO VARNISH A COACH OR A CAR
SINCE USING THE PEARL
I CAN WED MY BEST GIRL
AS MY CASH ACCOUNT TICKLES HER PA

WHY? Because they are the BEST and the prices LOWEST POSSIBLE. If you have never sold them be sure and give them a trial. They are for sale in every city, and nearly every town in the United States. If your jobber does not supply you with them, let us know, and we will send you name of one who will.

BE SURE THAT OUR NAME IS PLAINLY STAMPED ON EVERY BRUSH YOU BUY. Our Brushes are so popular that many inferior imitations are being offered, which are unprofitable to buy at any price compared with ours.

You will make Money, you will please your Customers by handling Whiting's Paint, Varnish, Sash, Wall, Whitewash, Kalsomine, Shaving and Artists' Brushes and Pencils.

MANUFACTURED ONLY BY

John L. Whiting & Son Boston Mass.

ESTABLISHED 1837.

HENRY WOOD'S SON & CO.,

BOSTON, MASS.,

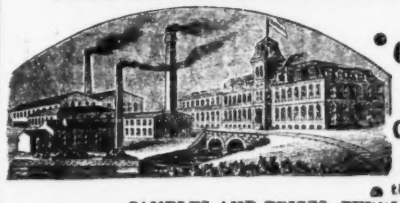
SOLE MANUFACTURERS OF

THE CELEBRATED

MARSEILLES GREEN

Or Paris Green Substitute.

MARSEILLES COLORS.



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Greens, Yellows, Vermilions, Carmines, Lakes, &c., &c.

AND EVERY DESCRIPTION OF

Coach, Car and House Painters' Colors.

Received Highest Award GOLD MEDAL at the World's Exposition, New Orleans, 1884-85.

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FRANK MALONE & CO., Prop's.

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MANUFACTURERS OF

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BERMUDA OCHRE TRADE MARK

SINGLE AND DOUBLE WASHED AND EXTRA FLOATED.

This Ochre is equal in every respect to ROCHELLE, and contains less it. Especially adapted for GRINDERS' use.

For sale in lots to suit, by

GRIDLEY & CO., Sole Agents of the BERMUDA OCHRE CO.,

87 Maiden Lane, New York

LEECH, NEAL & CO., Derby England.

MANUFACTURERS OF

SUPERIOR ENGLISH N VENETIAN RED.

INDIAN, TURKEY and VENETIAN REDS.

Purple Browns Metallic Oxides, &c.

The Largest Producers in the World.

WORKS, SPONDON AND DERBY.

SAMPLES & PRICES ON APPLICATION.

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SUPERIOR ENGLISH HB VENETIAN RED.

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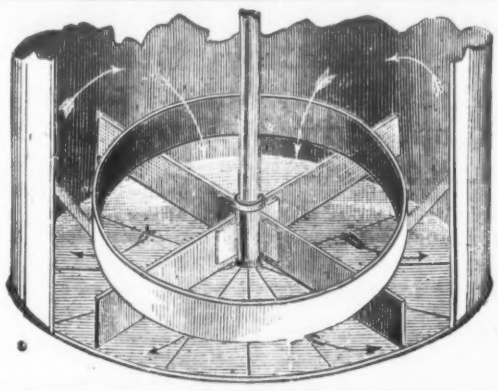
Proprietors of the CRESCENT CHEMICAL WORKS: Sole Agents for the Sale of the LEHIGH ZINC AND IRON CO.'S Products.



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U. S. PAT. No. 328,513.

Lateral Displacement System.

We make a perfect Mixer and guarantee it as such, for preparin

DRY KALSOMINE.

of 200 lbs. capacity per hour by hand for $18.00, and of 800 lbs capacity by power for $30.00; other sizes to order. The same apparatus will serve for mixing paints. Small working models for mixing dry or fluid masses furnished if desired.

NIAGARA MIXER M'F'G CO.,

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(CAPITAL, $1,500,000.)

MANUFACTURERS OF

POLISHED PLATE-GLASS,

SKYLIGHT GLASS, FLOORING GLASS.

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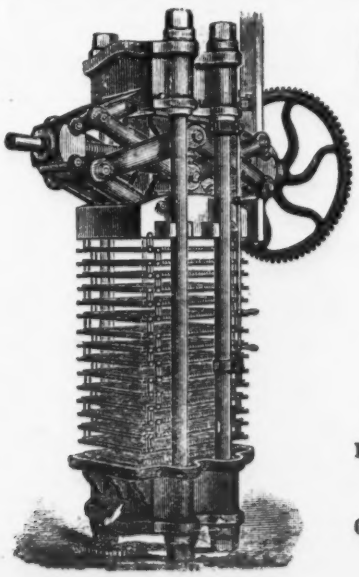
PETROLEUM BARREL PAINTS.

OF ALL COLORS.

S. G. NEWCOMB, Manager. Office: 26 Broadway, New York.



G. H. BUSHNELL & CO.,

Sole Manufacturers of

Bushnell's Improved Knuckle Joint Hand or Power

PRESSES.

Herbs, Linseed, Lard, Cottonseed, Castor, Fish and Paraffine Oils.

Our Largest Presses will work a Pressure of 500 Tons.

Illustrated Catalogue sent on application. Correspondence Solicited.

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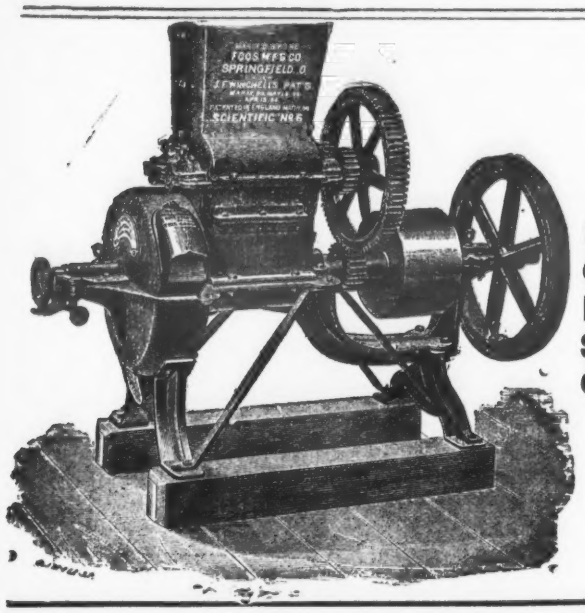
On New York, New Haven & Hartford R. R. (main line between New York and Boston) 17 miles North of Hartford, Conn., and 9 miles South of Springfield, Mass.



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FOR GRINDING

Tankage, Guano, Phosphate, Phosphate Rock, Fish Scrap, Manure, Meal, Ammonia Salts, Fire Clay, Burnt Brick, Coke, Drv Clay, Crackers, Buiscuits, Salts, Borax, Black Lead, Soap Powder, Soda Ash, Starch. Sal Soda, Coffee Extract, Drv Ochres, Umbers, Siennas, &c., &c., has no equal,

Will make experiments and report results, without charge, on any Special Work. Correspondence solicited.

The Foos Manufacturing Co.

SPRINGFIELD, OHIO.

Meriam & Morgan Paraffine Co.

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Manufacturers of

COLD PRESSED PARAFFINE OILS, REFINED PARAFFINE WAX, PARAFFINE WAX CANDLES, PARAGON AXLE GREASE.

"PARAGON SPINDLE" OIL, OILS for GENERAL MACHINERY, "CURRIERS' FINISHING" OIL.

Chicago Office, 110 Lake St.

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Direct Receivers, Importers and Dealers in

PURE COD OIL

Newfoundland & Domestic,

WHALE, SPERM, FISH, BANK, STRAITS & MENHADEN OILS

MEDICINAL COD LIVER OIL

Prices and Samples Furnished.

PARAGON AXLE GREASE

George Delano's Sons,

Sperm, Whale and Menhaden Oils,

Refined Spermaceti, Sperm and Paraffine Candles.

WHALE AND FISH PRESSINGS,

SPERM, WHALE AND FISH OIL SOAPS.

Factory, New Bedford, Mass. 140 FRONT STREET N. Y.

Josiah Macy's Sons,

GENERAL COMMISSION MERCHANTS,

189 & 191 FRONT STREET, NEW YORK

Manufacturers of the Celebrated Brand

"Macy's Prime" Lard Oil.

SPERM, LARD, WHALE, COTTONSEED, ELAIN AND RED OIL, "CLEMENT'S" CORN STARCH, IN BOXES AND BARRELS, for Export and Manufacturers use. AGENTS FOR L. Z. O. OXIDE OF ZINC, WESTERN AND SOUTHERN PRODUCE SOLD ON COMMISSION.

J. N. KNOWLES, Manager. EDWIN L. GRIFFITH, Secretary.

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MANUFACTURERS OF

Sperm, Whale, Elephant & Fish Oils

Spermaceti, Sperm Candles,

WHALE AND FISH PRESSINGS,

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S. W. KNOWLES & CO., 82 Front St., New York, Eastern Agents.

INGALLS & COMPANY,

(Works, Grand Trunk Junction,)

Illuminating and Lubricating Oils.

AGENTS FOR

Wilson & Evenden's Oil Tanks and Shipping Cans

OFFICE No. 46 JEFFERSON AVENUE - - - DETROIT MICH.

We Will Buy Good Second-Hand Carbon Oil and Naphtha Barrels.

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PRINCIPAL OFFICE AT CHICAGO.

Address, New York Office at 218 Produce Exchange.

We call especial attention of the Drug Trade to our

"FAIRY SOAP."

The "Fairy" Brand is the Purest Soap ever manufactured. We warrant it far superior to any imported Castile Soap. Send us a trial order.

Lard Refiners, Oil Pressers, Soap Makers.

MANUFACTURERS OF

Extra Double Refined Acidless Lard and Tallow Oils

AS WELL AS ALL GRADES OF

Lard Oils, Tallow Oils, Neatsfoot Oils.

—REFINERS OF—

ACIDLESS CYLINDER TALLOW.

Our Acidless Products are warranted not to contain above one-quarter of one per cent. of Free or Fatty Acid.

N. K. FAIRBANK & CO

N. B.—The best brands of Butchers' and Packers' Tallow contain from one to ten per cent. fatty acid.

R. BEAUGRAND,

Manufacturer and Wholesale Dealer in Canada and foreign Oils.

Sole Agent in CANADA for the Celebrated CRYSTAL OIL. Office and Warehouse No. 13 ST. THERESE STREET. MONTREAL.

LATEST IMPROVED COTTONSEED LINTER.

MANUFACTURED BY

CARVER COTTON GIN CO.,

EAST BRIDGEWATER MASS.

This Linter improves the Seed for all purposes, whether for Oil Feeding, to Stock or Planting. Correspondence solicited.

OIL MARKET.

Note—*Our prices are for large lots except when otherwise specified, and buyers of small lots must expect to pay an advance on these figures.*

The prices current will be found on page 49.

Vegetable Oils

TUESDAY EVENING, Jan. 17.

The linseed oil market is in a steady position at former prices of 55@56c for city domestic and Calcutta oils, and 54@55c for Western oil on spot. There is a strong undercurrent, and the trade seems to be waiting in expectancy for another advance. The movement is quiet, still buyers are satisfied to fill their wants at current prices, as there is good cause for the advancing tendency. Receivers of Western oil report a dull situation, as they have little stock to offer. Indications would seem to point to higher values soon.

The cotton oil market is easier and unsettled. There is an absence of buyers because they are well supplied and the market lacks every essential feature to give it tone. Crushers are well stocked with seed and the mills are running to their fullest capacity, thus causing a large production for which there is no immediate outlet. The lard market has also indicated weakness during the past few days and any important decline in that product ought to have an impression on cotton oil values, as lard refiners are not disposed to pay stiff prices for their raw materials. With this combination of circumstances to contend against, it is a difficult matter to support present quotations on cotton oil. This view of the situation has been previously expressed in this column, and those persons who entertained different opinions have come down in their scale of values, which is evidence that the market is taking its natural course in spite of artificial support. The entire week has been devoid of interest; a few sales of crude at 36c and prime summer yellow at 41c occurred on Thursday and Friday, but since then the market has remained stagnant. Some holders are anxious to realize, but hardly know what their supplies will bring, as no recent opportunity has presented itself for testing the market. Receipts of oil have been very large, and as orders from exporters are disappointing, it has been found necessary to store the frequent arrivals. Thus accumulation is taking the place of an active movement, and the best posted dealer is at sea regarding present and prospective values. Traders are occupying their time in seeking information and studying the situation to ascertain where they stand. As a bluff, prime summer yellow was openly offered to-day on spot at 40¾c, to arrive at 40c, and February delivery at 40@40¼c, but it would not be surprising if these or less figures were generally accepted before our next report, as there are offerings on spot at 41c, and we are informed that some private transactions occurred at a less figure, and that other lots on spot can be bought at a decline. A few holders still name 41¼@42c, but 40½c@41c are recognized on the part of buyers as the top figures for lots of 25 to 100 bbls. Although the quotation of white summer is 44c, business has been done at 43c, but the winter grades remain on a firm basis. It was reported to-day that the Western markets on cotton oil are demoralized, and that prime summer yellow was selling in Chicago at the quoted price for crude in this market, which is 36c. If supplies are forced on this market, there is no telling where the decline will stop; the disposition of holders to support prices is the only redeeming feature, and prevents a general rush to realize; how long this desire will continue is an open question. Values are still higher than this time last year, and present price of crude oil is relatively higher than at New Orleans, as we are wired to-night that the market there is 32c. We hear of 150 bbls off quality crude changing hands in the New York market at 32½c. Is this a barometer of values in the near future? This time last week everybody who held crude was demanding 37c, but 36c is the actual figure wanted to-day for prime oil, and holders would like to know what buyers will pay. Soap stock has been taken to the extent of 500 bbls at a fraction under 1¼c.

Exports of cottonseed oil from New York by countries

To	For Week ending Jan. 16, 1888. Bbls.	Since Sept 1, 1887. Bbls.	Same time last year Bbls
Africa	..	....	....
Arg. Republic	..	....	10
Australia	..	64	35
Austria	..	2651	....
Belgium	..	6900	1055
Brazil	5	70	186
Br West Indies	16	252	416
Br Guiana	..	1	...
Canary Islands	..	....	....
Central America	..	6	13
Chili	..	3	44
China	..	....	....
Cuba	..	.. .	1
Dan West Indies	..	45	51
Denmark	..	1	....
Dutch West Indies	..	....	....
Ecuador	..	....	....
Egypt	..	....	....
England	..	910	1095
France	..	8452	1960
French West Indies	..	11	339
Germany	..	562	308
Hayti	..	15	3
Italy	..	900	....
Mexico	..	.. .	3
Netherlands	450	9577	13567
North America	..	73	9
Norway	..	45	..
Peru	..	....	....
Pto Rico	..	20	1
Scotland	25	75	100
Spain	..	....	....
Turkey	..	....	....
U S Col	..	20	16
Venezuela	5	12	12
Total	601	29012	19394

Exports of cottonseed oil from New Orleans by countries:

To	For week ending Jan. 14, 1888. Bbls.	Since Sept. 1, 1887. Bbls.	Same time last year. Bbls
Austria	..	....	....
Belgium	2600	2700	300
England	..	...	...
France	..	420	....
Germany	..	1458	760
Gibraltar	..	...	3200
Italy	..	....	200
Netherlands	..	9200	....
Portugal	..	....	.. .
Spain	..	2500	2000
Total	2600	16278	6560

Exports of soap stock from New Orleans by countries:

To	For week ending Jan. 14, 1888. bbls.	Since Sept 1, 1887. bb.s.	Same time last year. bbls.
Cuba	..	....	. .
England	..	....	390
Italy	..	...	. .
Spain	..	....	..
Total	..	....	390

Ceylon cocoanut oil seems to be difficult to advance, although it is conceded that the firm position of the tallow and grease markets justifies higher prices for cocoanut oil. Holders have arrived at the determination several times not to sell under 5¼c for store lots, but competition still keeps the price down to 5 40@5 45c for large packages, although it is doubtful if the first named figure would be accepted except from one quarter. We hear of 15 tons changing hands at 5 45c. Cochin oil is nominal at 7@7¼c.

Olive oil is said to be higher in the foreign markets and holders here are inclined to ask better figures, but 66@74c will still buy Italian and Spanish oils. Considerable business is reported in anticipation of higher prices.

Animal and Fish Oils.

Lard oil is unsteady, but still quoted at 63@64c for prime city and some Western brands, but we have information of important lots of prime city being sold at 61c since last writing. Lower grades have no settled value, and buyers are generally favored.

Menhaden oil values are about steady at 23c, but no business has occurred recently. Buyers are comparatively well supplied, and those who are meditating a purchase are probably awaiting the result of the annual meeting of the Menhaden Association, which occurs to-morrow, so that they can become posted on the statistical position from that standpoint. Holders are not pressing supplies by any means, as there is little stock to come on the market from first hands. It is said that the number of firms interested in fishing will be somewhat decreased next summer, as the business is represented to be unprofitable and opposition along the coast is becoming more aggressive. This lament however is heard every year, and so long as a market is found for menhaden oil and scrap, sufficient men will pursue the business to supply the trade.

Oleo oil has fluctuated slightly since last writing, the changes being confined within a cent range. Choice grades command 11@11¼c.

Saponified red oil is firm at 4¼@4½c per lb, with a tolerably fair movement, and while tallow remains on its present basis, red oil will command full figures: Elaine oil is still quoted steady at 32c per gallon, less 1 per cent, and will probably follow the course of tallow fluctuations on that basis. Business is quiet.

Crude sperm oil is quoted steady at 62c, and as inquiries are more important from manufacturers, firmer prices are expected to prevail. The only sale was a lot of 115 bbls on private terms. The refined market is unchanged in any particular.

Crude whale oil is wanted and there will likely be a scramble for the first lot of Northern oil, which is now on its way from the Pacific coast via Panama. The New Bedford market is bare, so far as offerings are concerned; a small lot is held off the market. Refined grades may be higher soon.

Whalebone is still quoted at $2 25 per lb for Arctic, at which price considerable business is reported in this market and New Bedford. Holders are talking higher prices, but there is no evidence of speculative interest to support an improvement in values.

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18 & 20 PLATT ST., NEW YORK.

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Animal, Vegetable and Minera OILS.

Valve, Cylinder, Signal, Machinery Engine and Lubricating Oils.
Sperm, Lard, Tallow, Neatsfoot, Whale Elephant, Seal, Cod and Fish Oils.

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All grades of Pure Olive Oil Soap for Silk and Worsted Mills, either in bulk, bars or powdered.
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Producers of Pure Natural West Virginia Rock Oils.

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Refiners and Manufacturers of CRUDE, REFINED AND BLEACHED
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Pure Winter Pressed Miners' Oils, White and Yellow, the best BURNING ever prepared for Miners' use: Superior to LARD OIL and at LESS COST! Guaranteed to remain limpid at Freezing Point.
OF **Salad Oils,**
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Purely Vegetable
Cottonseed Oil, Cake and Meal Reginnings & Soap Stock
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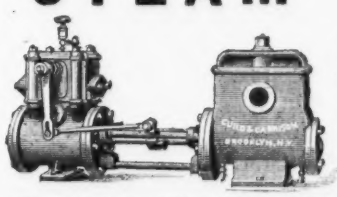
Fidelity Man'f'g Co.
PRESSERS OF
MENHADEN FISH OILS,
EXTRA, PALE, ST. PRESSED AND BROWN
FOR DOMESTIC OR EXPORT TRADE.
Factories Long Port. 1102—1108 Noble St., Philadelphia

STEAM PUMPS



For Hot or Cold, Fresh or Salt Water; for Oils, Naphtha, Tar; for Cane Juice, Liquors, Syrups, Scum for Ammonia, Alkalies, Extracts, Acids; for Thick, Volatile, Viscous or Foul Liquids, etc. VACUUM PUMPS of the highest efficiency. FILTER PRESS PUMPS. Air, Gas and Acid Blowers. AIR COMPRESSORS, Etc.

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Send for Quotations. FRED. G. CLARK, Broker in Petroleum Products, Animal Oils, &c.
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Redistilled and Deodorized Naphthas,

AND

GASOLENE FOR GAS MACHINES, &c.

72° Deodorized Naphtha, for the Manufacturing of Varnishes, Dryers, Liquid Paints, &c.
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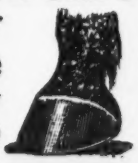
Wide awake Jobbers and retailers realize that there are certain commodities that become standards in consequence of their increasing popularity year after year. Not because they are forced upon the trade, but on account of their intrinsic worth. It is the keen tradesman that caters to this established demand instead of taking advantage of the consumer by palming off on him some cheap imitation. The former course is a practical protection of commercial relations, while the latter destroys confidence and injures trade. Practical experience of nearly a quarter of a century has taught the shrewd consumer that there is no better leather preservative known to the trade than ***VACUUM HARNESS OIL.*** The peculiar process and care in manufacture, secures a uniformly good article. It penetrates the leather, making it soft and pliable. giving double wear to Harness, Carriage Top, Shoes, etc. Some people, however, will count the first cost and for this trade is the ***FAVORITE HARNESS OIL*** of the same grade, only a little less in quality at "way down" prices. The only satisfactory cheap oil. Another essential to every well regulated stable; almost as indispensable as hay; is the ***VACUUM HOOF OIL;*** a peculiarly penetrating and searching salve. Horsemen know it is the great remedy for Sores, Wounds, Galls, Sprains, Quarter Crack. These goods are offered to the trade at discounts that pay for handling, and on liberal credit. Send for prices and other information to



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No. 96 Water St., NEW YORK.
No. 305 Walnut St., PHILADELPHIA.
No. 150 First Ave, PITTSBURG, PA.
No. 96 King St. West, TORONTO.

Mineral Oils.

As usual, the export movement continues to improve and American lubricating oils are finding a larger outlet abroad than ever known. The increase last month was 756,760 gallons of lubricating oils alone over the same month last year, while the shipments for the past twelve months show an increase of 6,591,018 gallons over 1886.

The uncertainty of the crude oil market and violent fluctuations during the week have caused refiners of lubricating oils to go slow in elevating their views. Two weeks ago there was a tendency to rush things and everybody was talking higher prices for lubricants, because of the prospects in the crude oil market, but this talk has quieted down, and there is more of a settled feeling surrounding the market for manufactured products. Paraffine oils, although in a sensitive position for some weeks, can still be bought at 9½c for 25 gravity, and 7½c for 28 gravity, but most brands are held at ½c higher. Business in this line is good, and domestic orders are still a little behind, but not to the same extent as one week ago.

The recovery to better prices is also noticeable in cylinder stocks and neutral oils. The change is not so much an advance as a curtailment of concessions, and instead of the buyer dictating as customary, the seller is in a better position to compel an acceptance of his terms. Thus a better tone is given to the market without material changes in quotations.

Smith's Ferry oil commands a wide range of values. It has been the black sheep of the market for some time, and even now it is difficult to ascertain what kind of oil constitutes Smith's Ferry. At all events some holders quote 8@9c, and we are told that 7@7½c will buy from other holders. Black oils are firm at previous figures.

Oil Cake.

The oil cake market is firmer owing to advancing markets abroad, but as very little stock is held here no business is reported for immediate delivery. Holders ask $25 per ton for Western cake on spot, and the market may be quoted steady at $24 75@25. Cotton cake is quoted at $20 50 and meal at $20 75 per ton in New Orleans.

Wax, Candles, Lard, Tallow, Etc.

Crude paraffine wax is steady and quiet at 4¼c for 124@126 melting point. There are more sellers than buyers, and prices may decline if holders manifest an anxiety to realize. No important business is reported. Refined paraffine wax is stationary in price at 8@8½c for 1.0 melting point, and 9@10c for 134@136 test.

Lard is lower and quoted at 77½c for Western on spot, and city steam at 75c. Refined lard is dull and steady at 7 80@8 40c. Stearine is easy at 8¼@9½c for choice city, and 6c for oleo stearine.

Tallow is in a firmer position and wanted at 4¾c for city. Offerings are light.

Naval Stores.

Spirits of Turpentine—The past week was not as auspicious to holders, as was the previous one, owing to the fact that the stocks at this port were larger, and the advices from the primary districts became less favorable as the week advanced. The trading has been confined to small proportions, buyers not showing a disposition to enter the market, except to supply themselves for actual needs, which were limited. At the close to-day the market was dull, with 41½c as the ruling price.

Rosins—There has been a scarcity of orders for large parcels during the past week, the transactions being entirely on the moderate jobbing order. The movement for export has also been exceedingly light, and the week must be recorded as one of limited trading. Quotations have beenfairly maintained, themarket closing steady to day with the following prices ruling, the same being identical with those current at the same time last week. Strained, $1 7½; G S, $1 10; E, $1 25; F, $1 25@$1 30, G, $1 32@1 35; H, $1 40; I, $1 50; K, $1 60; M, $1 80; N, $2 05@2 10; W G, $2 50@2 60; W W, $3 20.

STOCK ON HAND AT

	Spirits.	Rosin.	Tar
New York, Jan. 16 Bbls	3,276	30,585	1,359
Savannah, Jan. 13.....	6,223	117,869	....
Wilmington, Jan. 14....	2,497	82 460	5,587
Charleston, Jan. 13.....	2,255	29,434	....
London, Jan. 9.....	13,800	....	....

Under date of Wilmington, N. C, Jan. 14, 1888, Messrs. S. P. Shotter & Co. say:

STOCKS AFLOAT AND ASHORE JAN. 7, 1888.

	Ashore. Bbls.	Afloat. Bbls.	Total Bbls.
Spirits of Turp.	2,236	261	2,497
Rosins.....	77,120	15,340	92,460
Tar.....	4,542	1,045	5,587
Crude.....	742	....	742

RECEIVED AND MANUFACTURED.

	Spirits.	Rosin.	Tar
Jan. 7 to 14, 1888.....	1,307	12,878	1,130
Last year	723	6,049	1,020
Crop to date.....	67,796	273,694	41,768
Same time last year ...	57,008	234,936	7,666

DOMESTIC EXPORTS.

	Spirits.	Rosin.	Tar.
New York.....	333	3	508
Sundry.....	443	62	182
	776	65	6 0
Total foreign.....	550	8,190	....
Total exp's Jan 7-14	1,326	8,255	69

TURPENTINE STATISTICS.

Messrs. Watt & Son, London, under date of Dec. 31 say:

	1887.	1886.	1885.	1884.
Stock Dec. 31...	15,195	24,596	43,516	44,678
Delivered this week.....	600	622	857	159
Since Jan. 1....	68 525	70,131	55,645	57,534
Price Dec. 31..	29s d	27s d	27s 0d	24s 3d
Jan-April... ..	29s3d	27s 6 l	27s 3d	23s 9d

Clearances of Petroleum.

(Continued from page 33.)

Jan 12

Am str San Marcos, Havana, 1100 cs
Am bk Mabel, Calleo, 37 bbls, 4183 cs
Am bg J L B wen, Savannah, 17500 cs cde
Am Bg Rising Sun, Bridgetown, 5 0 cs
Am bg J C Noyes, Pt Natal, 1230 cs
Am sch Phoebe, Mayaquez, 200 cs
Am sch W C Green, Hamilton, 99 bbls 30 cs
Am sch L G French, Baranquilla, 1700 cs
Nor str Weihaven, San Juan, P R, 315 cs
Dtch bk Siamat, Batavia, 34300 cs

Jan 13

Am bg H M Rowley, St John, P R, 1600 cs
Ger str Hans & Kurt, Hamburg, 2236 gls blk
Ger str Polaria, Hamburg, 25 bbls
Nor bk Grundloven, Bremen, 4971 bbls naphtha
It bk Carrara, Malaga, 14668 cs

Jan 14

Am str Colon, Panama, 390 cs
Am str Colon, Colon, 55 cs
Am bk Albemarle, Pt Spain, 1700 cs
Am bg Americus, La Guayra, 1255 cs
Br str Strathleven, Yokohama, 12 cs
Br str S rathleven, Hong Kong 100 cs
Br str Pomona, Montego Bay, 500 cs
Br str Muriel, Barbadoes, 3 bbls
Br str Muriel, St Lucie, 100 s
Br str Muriel, St Kitts, 50 cs
Br str Muriel St Pierre, 40 cs
Br str Muriel, Antigua, 285 cs
Br str Muriel, Trinidad, 85 cs
Br sh Servia, London, 8243 bbls
Nor str Alert, Jacmel, 25 cs
Nor str Alert, Petit Goave, 40 cs
Nor bk Patmas, Montevideo, 3450 cs
It bk Columbus, Malaga 45'00 cs cde

Jan 16

Am str Philadelphia, Curacoa, 12 bbls 50 cs
Am str Philadelphia, La Guayra, 2 bbls 9 0 cs
Am str Philadelphia, Pto Cabello, 4 bbls 715 cs
Am str Philadelphia, Maracaibo, 210 cs
Am bk Essex, Sydney, 500 cs
Am bk D M French, St Pierre, 500 cs
Am bg Sunlight, Georgetown, 500 cs
Am sch E A Warner, Mayaquez, 250 cs
Am sch E A Warner, Ponce, 200 cs
Br str Thames, Kingston, 110 cs
Br str Hondo, Porto Cortez, 50 cs
Nor str Odin, Ciudad Bolivar, 170 cs
Nor str Odin, Carupano, 180 cs
C R bg Miles Standish, San Andreas, 230 cs

BOSTON

Jan 9

Sch Lily E, Yarmouth, 50 bbls

Jan 10

Sch Juno, St John, 50 bbls, 50 cs

Jan 14

Sch Delight, St Johns, 165 bbls
Sch A G O'Leary, Cayenne, 50 cs

PHILADELPHIA

For week end ng December 24, 1887, not before published.

Dec 17

Bk Antonia A Abundo, Seville, 17948 cs cde, 1500 bbls cde
Str Yexford, Biscegila, 5'500 cs

Dec 20

Bk Superbo, Rouen, 2517 bbls cde
Ba Todoy, Oporto, 1100 bbls, 2023 cs

Dec 21

Bk Silicon, Passages, 2887 cs cde

D c 22

Ship Annie M Law, Dunkirk, 7555 bbls cde
Bz Trust, Bilbos, 17518 cs cde
Ship Otago, Dunkirk, 6930 bbls cde

Jan 7

It bk Castello Dragone, Tarragona, 25418 cs cde

Jan 8

Nor bk Athlet, Alicante, 23 08 cs cde

Jan 11

Am bk Nehemiah Gibson, Bilbao, 25111 cs cde

Jan 13

Am bk Vitez, Palma, 45 09 cs cde

Imports of Empty Barrels.

NEW YORK

920, Sawyer, Wallace & Co, Italia, Carlskrona
4536, G Heye, M Johanna, Amsterdam
5302, G Heye, Levuka, London

PHILADELPHIA.

4375, order, Alfredo, Havre

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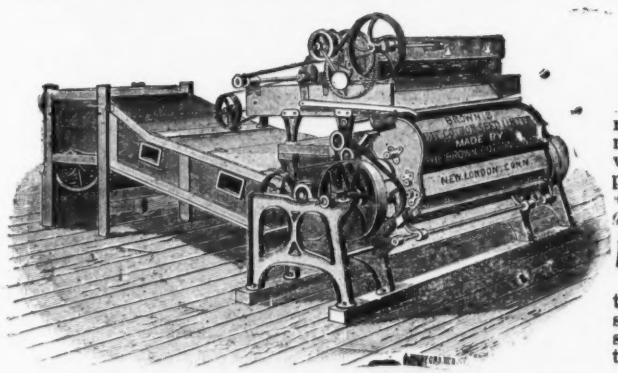
The Brown Cotton Gin Company,



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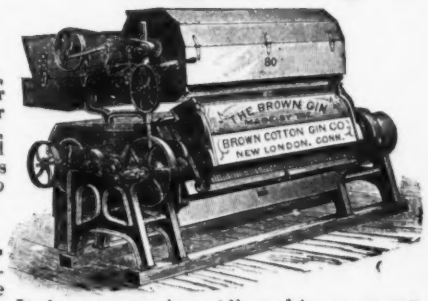
Leads all others in quantity and quality of work, in pleasing the buyer, and in sales. The number now in use being nearly equal to any two other makes. ☞ It is strong and simple in construction, very durable, gins fast, runs light, cleans the seed perfectly and produces first-class samples. It has all the latest improvements, and is *Guaranteed to give Satisfaction.*



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This machine is specially adapted for use in cottonseed oil mills. It removes the lint left on the seed after they have passed through the cotton gin. It does its work rapidly and in every way satisfactorily. They are made of the best materials in a workmanlike manner. We guarantee them superior in every respect to any machine of the kind in the market.

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SAFETY OIL.

BEST IN THE WORLD.

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THE CINCINNATI TRANSFER CO.,
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Mica Axle Grease is very satisfactory in every respect. *Quite superior to any axle grease we have ever used before.*
W. J. Winterbottom, Supt.

We endorse the above.
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Springfield, Vt.

I have a large sale of Mica Axle Grease. *It wears three times as long as any I ever used.*
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We have sold Mica Axle Grease for five years. *It is the best Grease manufactured.*
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I have used Mica Axle Grease for about *eight years* with the very best satisfaction. *It doesn't run off the axle in hot weather; and it doesn't chill and harden in cold weather.* I have used almost all other makes of axle grease *and consider the Mica worth more than twice as much as any other for my use.*
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White Cottonseed Stearine,
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ESTABLISHED 1855.

COTTONSEED OILS,

Crude, Summer White and Yellow, Winter White and Yellow.

PURE SALAD P S, OLIVE FLAVORED

SALAD OILS IN BOTTLES AND CASES.

WHITE AND YELLOW STEARINE.

Scouring and Fulling Soap and Soap Stock.

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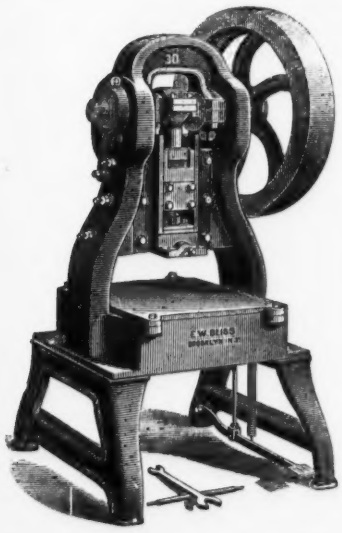

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COLD TEST AND SUMMER BLACK OILS.

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PETROLEUM MARKET.

TUESDAY EVENING, January 17, 1888.

The week under review has been an eventful one, several extreme fluctuations, accompanied by unusual excitement, at one time closely approaching a panic, having occurred. The break on Friday of 3½c was but the forerunner of two more serious ones, though, it was supposed that the full effect of the news from the wells had been felt and that a reaction was in order. When the market opened on Saturday there was an uncertain feeling and some free offerings caused a break which in its turn influenced further selling precipitating a break of 5½c amid a scene of excitement rarely equaled on this or any other oil exchange. The feeling was decidedly panicky and it was some time before there was anything like a feeling that the worst was over and there was sufficient confidence, even at the lower figures, to warrant the operators in sustaining the market by liberal purchases. There had latterly been a growing long interest here which, however, was not a strong one, and the first break caused unwarranted alarm and the selling of oil at a loss which if held would possibly have prevented the second break. Primarily the collapse was due to the incoming of a couple of wells whose production can make but little difference in the total production report for this month, if indeed their combined output will prove sufficient to offset the gradual decline in the old wells. The experiences of the past week show the sensitiveness of the petroleum markets to bear influences. It has taken two months of restricted operation in the field and reduction of the stocks of over 2,000,000 barrels to raise the price above 90c, and while this reduction is going on and the production is even further restricted, the incoming of a couple of moderate wells nearly creates a panic and causes a drop of 10c in the price. Opinions differ greatly as to the prospects and operators are unusually cautious, as the feeling of distrust has become very general and fears of another cyclone are rife. Some of those who were rampant bulls ten days ago are now in the bear ranks and the past three days has shown a larger short interest, though the interest is not believed to be heavy, unusual caution being considered necessary in operating on either side, and much anxiety is shown as to the developments of the coming week. The transactions during the past week show a large increase over those of the previous week, the sales footing up 30,798 000 bbls against 23,964,000 bbls for the preceding week. The clearances of the local exchange amounted to 48,718,000 bbls, against 52,308.000 bbls during the preceding week. The total clearances reported for the other four exchanges amounted to 64 517,000 bbls against 83,349,000 bbls for the preceding week. The highest price of the week was reached on Thursday, when 97c was touched. The lowest point of the week was 85¼c and was touched to-day. The opening price last Wednesday was 9 3/4 and the close this evening was at 8 7/8, showing a loss as the result of the week's trading of 8⅝c, while the extreme range of fluctuations for the week was 11¾c.

The event of the week in the producing fields has been the incoming of the Schlagle well at Glade Run and the Burchfield well at Brush Creek. The former is doing about 300 bbls a day, and the latter estimated something over 100 bbls. The Brush Creek well is supposed to open up territory which hitherto had been considered worthless and is therefore important.

In the Saxonburg field the Loan well, on the Muder farm, lost the tools Saturday, and they are fishing. It is a good gas well and would be very valuable as such were it not so close to developments, but its close proximity to other wells speaks for it a short lived affair. The Philadelphia Gas Company are to drill for gas at once on the Frederick farm, almost due east of Saxonburg town, and about three miles away, and Reep & Sutton are also after gas on the Tood farm, about three and one-half miles a little north of east of Saxonburg town, and but a few rods west of the famous Butler and Armstrong county line. Connors & Fishel 2, Warren farm, is a failure; no fourth sand was found. Craig & Co. is in the hundred-foot sand.

In the Reibold field, Critchlow No. 3, Critchlow farm, is drilling at 1,000 feet. Leidecker Bros.' 3 on J. Gailbaugh is in the hundred-foot. Schlagler & Co. on P. Gailbaugh are nearly through the hundred foot, and N. G. White & Co. on Ghering, three fifths of a mile west of Glade Run railroad station and one-fourth mile north of Phillips' shut in gusher, and about half way up the sides of the "Great Divide" is drilling. Smick & Co., on the Snow farm, is in the oil sand, and n. g. so far. The Gantz well, reported last week as good for 15 to 20 bbls in the hundred-foot, is very light, will not exceed 5 bbls per day. They will drill further. Coast & Son's No. 4, Blakely farm, is down to 4 bbls per hour. Bolard & Greenlee, on the Siebert farm, showed for a 50-bbl well after the shot. Chrystie 1, on the Fourch, is making 60 per day; the No. 2, 20 per day.

In and about Clarion a great deal of interest centers, and leases have been taken at $100 an acre bonus and one-eighth the oil, for small lots, the larger being 15 acres secured by the Union Oil Co., and another of 10 by the Anchor Oil Co. They were taken, presumably, to stop the drill. There have been several other locations taken in close proximity of the well, on which operations will be begun at once, and Clarion is to have a small sized boom. Some claim it is fourth sand, while others claim it to be the regular third sand. In the absence of limestone in the well and the depth of the well being 1,800 feet, it is thought to be fourth sand. The oil is nearly like the Butler or Cross belt, Thorn Creek and Saxonburg and entirely different from the Edenburg third sand oil, and that would be a count in favor of it being a fourth sand. One of the drillers on being asked what kind of drilling he had below the second sand, said: "Nearly all red rock. There was the big red rock, the pale red rock, a little slate and shales, and then the boulder." And, by the way, the boulder, so called, looks very much like the third sand. Twenty feet below the boulder the oil rock was struck. The whole depth from the second sand was something over 100 feet.

Wednesday, January 11.

The market opened at 9¾c, and was quickly brought up to 98c, which seemed to give promise that the day would prove eventful and the loss of the day previous be regained. The gain of two points, however, gave the highest price of the day, and before the end of the first half hour the market received a blow, knocking the price down to 95c. This caused some little excitement and heavy buying, which added a couple of points, but later the bears again got the upper hand and hammered the market down to 9½c, which proved bottom for the day. From this the recovery was slow, as there were many sellers who feared a further break. Later a slight reaction took place, but trading became light and the recovery was slow, though 95⅞c was again reached, and the final figure was 95¾c. This showed a loss of ¼c as the result of the day's business, while the range of fluctuations was 1⅜c. Trading at times was active and at others quiet, the sales footing up 2,745,000 bbls. The field news was to the effect that the Clarion well had struck salt water and stopped flowing, The Haymaker well on the Cramford farm at Saxonburg had reached the sand, but as yet has made no showing of oil or gas. The Coast well at Reibold was doing 10 bbls a day. The Pollock well at Canonsburg was drilling in search of fourth sand.

The half-hourly quotations were as follows:

A. M.		P. M.	
10:00	9¾	12:30	9¾
10:30	95	1:00	9¾
11:00	9¾	1:30	9⅝
11:30	9⅝	2:00	9⅝
12:00	9⅝	2:30	9⅝
		3:00	9¾

The clearances were as follows: New York, 6,245,000; Oil City, 2,460,000; Pittsburg, 3 846 000; Bradford, 3,066,000; Philadelphia, 1,130,000; total, clearances Jan. 11, 16,750,000 bbls.

Carrying rates were: New York, 30@35c; Oil City, 50@55c; Pittsburg, 40c; Bradford, 40@45c.

Market Jan. 11, 1887—71¾@72¾c.

Thursday, January 12.

The opening price was 9 3/4c, a gain of ¼c over the close of last evening, and this also proved to be the lowest price of the day, there being a steady improvement under fair trading until 9 7/8, when a reaction was brought about by the lack of support in the way of buying. During the last hour, however, there was renewed strength, and as it was believed there were considerable stop orders, an effort was made to drive the price up, which resulted in spirited bidding, which was helped along by shorts seeking to cover. During the last quarter of an hour the scene became very animated and the price brought up to 9 7/8, and one sale was effected at 97c, but then came a check, and the market dropped off a couple of points, closing at 9 3/4. This showed a gain of 1¼c under a range of 1¾c. Trading was rather light during the greater part of the day, but was active during the last half hour of the session, which brought the sales for the day up to 2,484,000 bbls. From Butler it was reported that the Pollock well at Canonsburg showed only a little oil, and was dry in the 50 foot and Gantz sands, and they were drilling to the Gordon sand The Coast well at Reibold had stopped flowing.

The half-hourly quotations were as follows:

A.M.		P.M.	
10:00	95¼	12:30	96⅛
10:30	95⅞	1:00	96
11:00	96¼	1:30	95⅞
11:30	9 ¾	2:00	96
12:00	96¼	2:30	96¼
		3:00	96¾

The clearances were as follows: New York, 6,812,000; Oil City, 2,388,000; Pittsburg, 3,363,000; Bradford, 1,626,000; Philadelphia, 998,000; total clearances Jan. 12. 15.187.000 bbls.

Carrying rates were: New York, 25@30c; Oil City, 50@55c; Pittsburg, 40c; Bradford, 45c.

Market Jan. 12, 1887—71¼@72c.

Friday, January 13.

The market opened rather quiet at 96⅜c and hovered near that figure for over an hour, the only advance gained being one point, leaving 96⅜c the highest price of the day. There seemed to be little interest manifested and business dragged along slowly while prices weakened steadily with only slight reactions. The day had proved very dull and featureless until the last hour, when news came that two new wells in the Reibold pool had reached the sand and gave promise of being important producers. This awoke the bulls and bears to unusual activity, and there followed a wild struggle to sell, but as the buyers were few the price dropped quickly to 93¾c amid much excitement. Here, however, there was a check, and by strong efforts the price was again moved up a few points, the market finally closing rather firm at 94c. The break came so suddenly and was so unlooked for that many were caught on the wrong side, but as it was claimed the break was not warranted by the reports which caused it, there was considerable firmness at the close. The close showed a loss for the day of 2¾c, while the range to fluctuations was 3⅝c. Trading was light until the break, which succeeded a season of activity which brought the total of the day's sales up to 2,960.000 bbls. From Butler it was reported that the Loan No. 2 on the Muder farm was gassing very strong on top of the sand. The Adler No. 3 showed for a fair producer. The Stagle well at Reibold reached the sand and was largely responsible for the break.

The half-hourly quotations were as follows:

A. M.		P. M.	
10:00	9⅝	12:30	9¼
10:30	96⅛	1:00	96⅛
11:00	9 ¾	1:30	96⅛
11:30	9⅝	2:00	9¾
12:00	9⅜	2:30	9⅝
		3:00	94

The clearances were as follows: New York, 6,290,000; Oil City, 2,290,000, Pittsburg, 2 70?,000; Bradford, 1,764,000; Philadelphia, 430,000; total clearances Jan. 13, 13,476,000 bbls.

Carrying rates were: New York, 25@30c; Oil City, 45@50c; Pittsburg, 40c; Bradford, 40c.

Market Jan. 13, 1887—71@72c.

Saturday, January 14.

The opening figure was 94c and was also the highest of the day, the fractions being whittled off with a rapidity that fairly took the breath from the longs, and there were quite a number of that class, while the number of outsiders who had been induced to operate on the long side during the recent boom was considerably larger than for a long time and many of the poor lambs were shorn. Saturday is a short session of only two hours but there was an amount of excitement crowded into that short period rarely witnessed on the exchange, and it has witnessed some exciting times in the past. The pit was a perfect pandamonium where the calls, hootings, cheers and yelling drowned out the bidding and it was difficult to keep track of the ever changing quotations. The exciting cause was the news from the field and also the report of the rout of the bulls on the Oil City and Pittsburg exchanges, Here the break was only arrested when the price reached 88⅞c, but the reaction was only temporary, the fluctuations coming in quick succession and the market closed very feverish at 91¼c, showing a loss for the day of 2¾c under a range of 5⅛c and that was the extent of the break. This gave a clear conception of how sensitive the market is to bear influences, as the incoming of a couple of wells of even large caliber can make but little change in the statistical situation. Trading was very active throughout, resulting in sales of 5,814,000 bbls. From Butler it was reported that the last gauge of the Stagle showed a production of 14 bbls per hour. The Burchfield well on Brush Creek showed oil and salt water in the 100 foot sand The Saxonburg production for the last 24 hours was 894 bbls from 40 wells.

The half-hourly quotations were as follows:

A. M.		A. M.	
10:00	94	11:00	9 5/8
10:30	9 7/8	11:30	9 1/8
		12:00	91⅛

The clearances were as follows: New York, 7,768,000; Oil City, 4.220,000; Pittsburg, 4,251,000; Bradford, 3,838,000; Philadelphia, 000,000; total clearances Jan. 14. 20,127,000 bbls.

Carrying rates were: New York, 15@20c; Oil City, 45@50c; Pittsburg, 40c; Bradford, 45c.

Market Jan. 14, 1887—68¼@71⅝.

Monday, January 16.

The initial figure this morning was 9 3/4c, and there was evidence in the strong support that a reaction was to be looked for. There were active buying, and as there were not many sellers at the opening figure the price was quickly run up to 93c, and finally the highest point was reached at 9 5/8c. Here came the turn, and the drop below 93c was equally rapid, the decline causing some excitement, while the sales were large, though there was not the panicky feeling noticeable on Saturday, Later prices fell steadily, and the afternoon was a bear harvest, the figures being successfully hammered until 8⅝c was reached. Shortly before the end of the session some determined operators succeeded in bringing about a reaction, but they were stubbornly opposed, and the final figure was brought down to 8 5/8c This made a loss for the day of 2½c under a range of 4¼c. The weakness was attributable to the news from the field, though ordinarily such reports would attract but little attention, There has doubtless been a larger long interest on all the exchanges than was altogether healthy, as many of those caught on the wrong side were ill able to stand the losses. It is a repetition of previous experiences. When the market ruled low and it was comparatively safe to operate on the long side, these operators kept aloof, but as the price neared the dollar mark the buying fever came on and the crisis followed. Trading was very active throughout and resulted in sales of 7,242 000 bbls. From Butler it was reported that the Stagle well at Reibold was doing 12 bbls an hour and is shut down. The Burchfield well at Brush Creek was not flowing, The Haymaker, Crawford, No. 2, at Saxonburg, was gassing strongly.

The half-hourly quotations were as follows:

A. M.		P. M.	
10:00	9 3/4	12:30	9⅝
10:30	93	1:00	9 3/8
11:00	93	1:30	9⅛
11:30	9¼	2:00	90¾
12:00	9 3/8	2:30	90
		3:00	89⅝

The clearances were as follows: New York, 10,122,000; Oil City, 5.374,000; Pittsburg, 4,595,000; Bradford, 0.00,000; Philadelphia, 1,245,000; total clearances Jan. 16, 14,706.000 bbls.

Carrying rates were: New York, 20@25c; Oil City, 40@45c; Pittsburg, 4 c; Bradford, 40@45c.

Market Jan. 15 1887—70@7 5/8.

Tuesday, January 17.

A gain of ⅜c over the closing of last evening was scored at the opening this morning, the first price paid being 90c. From this there was a quick advance to 9 5/8 and the impression again began to prevail that the reaction toward the middle nineties had set in, though there were few who were so confirmed in this belief to induce them to operate largely, and as there was some selling both here and on the western exchanges the price began to recede, dropping 3c inside the 8 at half hour. As the price went down there was active buying at the lower figures, but as there appeared to be more sellers than buyers, further shrinkages followed. Several times during the day efforts were made to bring about a reaction, but with only indifferent success, the advantage gained being soon lost and the price would drop lower than before. Finally 8 1/2 was reached and this proved bottom, the subsequent reaction bringing the figures up to 87c and the closing price was 86¾. Although the drop in price was nearly as important as on Saturday or yesterday there was nothing approaching a panic and the excitement was no greater than would naturally be expected to accompany the enormous business accomplished, the sales for the day amounting to 9,563,000 bbls. As a broker expressed it, "the boys are getting used to big fluctuations." While the break to-day was as unlooked for as was the one of yesterday there were few badly squeezed, the operators having become very wary. The break to-day was mainly due to the anxiety of some holders to unload. From Butler it was reported that the Stagle well at Reibold was doing 10 bbls per hour. The Burchfield well at Brush Creek had drilled into salt water and will tube. It is said to promise a small producer. The Haymaker well at Saxonburg was burning and shows for a small well. The Italy at Saxonburg is dry.

The half-hourly quotations were as follows

A. M.		P. M.	
10:00	90	12:30	87
10:30	85¾	1:00	85¾
11:00	86⅛	1:30	86⅛
11:30	87⅛	2.00	86⅝
12:00	87⅛	2:30	86⅝
		3:00	86¾

The clearances were as follows: New York 11,478 000; Oil City, 4.830,000; Pittsburg, 5,494,000 Bradford, 3,588,000; Philadelphia, 1,028,000; total clearances Jan. 17, 26,857,000 bbls.

Carrying rates were: New York, 20@25c; Oil City 40@45c; Pittsburg, 4 c; Bradford, 40c

Market Jan. 17, 1887—70⅜@71⅛.

The amount of daily sales and total for the week follow:

Date.	Bbls.
Jan 11	2,745,000
" 12	2,484,000
" 13	2.960,000
" 14	5,814,000
" 16	7,242,000
" 17	9,563,000
Total for week	30,798,000

Following is given the opening, highest, lowest and closing figures for each day, in tabulated form for comparison:

	Opening.	Highest.	Lowest.	Closing.
Jan 11	9 ¾	96	94½	95¾
" 12	95¼	97	95¼	9.¾
" 13	96¾	9 7/8	93¾	94
" 14	94	94	88⅞	91¼
" 16	9 ¾	93⅝	8⅝	8⅝
" 17	90	9 5/8	8 ¼	86⅜

The total clearances during the week at the several petroleum exchanges foot up as follows:

New York		48,718,0
Oil City	21,554,000	
Pittsburg	24,250 000	
Bradford	*13,882,000	
Philadelphia	†,831,000	
		84,517,000
Total		113,235,000

*Five days only; no report Monday.

†Five days only; no report Saturday.

The market for refined in barrels for export has remained steady at 7¾c for 70 deg. April test for all loadings, notwithstanding the violent fluctuations in certificates of the past few days. As the prices of certificates dropped below 90c to day, shippers look for a reaction in refined in their favor, but so far they have received little encouragement, as the feverish state of the speculative market makes it extremely uncertain what the morrow may develop. During the past week there has been no withholding of orders, as stocks abroad had

been allowed to run unusually low and the prevailing opinion was that the chances favored a further advance, the break in the speculative market being entirely unlooked for. The sales have been larger, fully 80,000 being reported for the week. The principal foreign markets have advanced their quotations, the figures by cable to-day being: Bremen 8 35 m; Antwerp, 21 f; London and Liverpool, 7½@9d. Freight rates continue very firm, and hence to London 2s 3d is quoted as the lowest, while to Continental ports the range is 2s 4d@3s as to port. Home trade lots have been in good demand and have been held firmly up to quotations. We quote 8⅝@8¾c for State legal test; 8@8⅛c for 110 test; 8¼@8⅜c for 120 test; 8¼@8⅝c for New York City 100 deg. flash, and 8¾@9c for 150 deg. water white. Western lots are held fully up to these figures.

Cases for export have been in active demand, the total sales reported amounting to over 400,000. The price has remained steady at 9¾c for plain tops. Freight rates are firmer. The rates for large vessels are: For Java, 27@28c; Japan, 22@23c; Calcutta 22@23c; Bombay, 19c; Rangoon, 20c; Singapore, 22½@23c; Hong Kong, 21@22c, and for Shanghai 29@30c.

Crude in barrels for export have continued in fair demand and sales of about 20,000 bbls are reported. Prices have remained steady to 7@7¼c, for Bradford and Parker respectively. Cases for export have been in good demand and sales of over 100,000 reported. Prices have remained unchanged at 9@9¼c.

Prime city naphtha has remained steady at 7c. For export there has been very little demand and only a few small sales are reported.

Western residuum, 42@51 degree test, is quoted at 1⅜@1½c f o b. Barrels are quoted at 5@5½c. No sales are reported for export.

Closing Quotations.

CRUDE.

National Transit Certificates	₽ bbl.	86¾@ 87
In bbls	₽ gal.	7 @ 7¼
In cases		9 @ 9¼
Residuum, bbls, for export 18@22°.		5½@ 6
for domestic use f o b		1¾@ —

REFINED, IN BARRELS.

Cargo lots, Abel test	₽ gal.	7¾@ —
Philadelphia loading		7¾@ —
Baltimore loading		7¾@ —
50 bbl lots, f. o. b. or on dock		8¾@8¾
bbl lots, f. o. b. or on dock		8¾@9

HIGH TEST OILS—JOBBING LOTS.

110 fire test S. W	₽ gal.	8 @ —
120 fire test, S. W.		8½@ —
150 fire test, S. W		8½@ —
State test		8½@ —
150 fire test W.W		8½@ 9
300 fire test		10 @11½
New York city 100 flash		8¼

REFINED IN CASES, 110 FIRE TEST.

Two-five, low screw, 10,000 lots	9¾@ —
5,000 to 10,000	9¾@10½
1,000 to 5,000	10¼@10⅝
200 to 1,000	10⅝@10⅝
Under 200	10⅞@11⅜

NAPHTHA AND GASOLINE.

Naphtha, crude, cargo lots, 68@72 deg.		—@ 7
Naphtha crude, car lots, 68@72 deg		7¼@ 7¼
Naphtha, crude, 70 deg		8½@ 9½
Sweet, 63 deg		8½@ 9¼
70 deg		9 @1
76 deg		9½@10½
Gasoline, 86 deg		13 @14
88 deg		15 @16
90 deg		18 @19

EMPTY PETROLEUM BARRELS.

Cargoes spot	$1 05 @1 06
Domestics, on dock	1 00 @1 02½
Subject to inspection	$1 05

Petroleum Statistics.

RUNS—TOTAL AND AVERAGE.

	Day.	Total.	Av'ge
Mon. Jan. 9	43,272	284,089	31,565
Tues. " 10	39,739	323,828	32,382
Wed. " 11	32,768	356,591	32,418
Thurs. " 12	31,821	388,415	32,368
Frid. " 13	31,746	423,161	32,551
Sat.,Sun. 14 & 15	42,278	465,459	31,029
January		1,898,418	61,239
February		1,673,603	59,772
March		1,877,333	60,559
April		1,852,118	61,737
May		1,886,755	60,863
June		1,780,343	59,345
July		1,746,659	56,344
August		1,745,629	56,311
September		1,618,421	54,947
October		1,751,676	56,506
ovember		1,125,390	37,513
ber		1,223,618	39,472
87		20,209,993	55,315

DELIVERIES—TOTAL AND AVERAGE.

	Day.	Total.	Av'ge
Mon. Jan 9	90,588	644,550	71,616
Tues. " 10	88,634	733,184	73,318
Wed. " 11	87,690	820,874	74,623
Thurs. " 12	75,939	896,860	74,738
Frid. " 13	81,590	978,450	75,267
Sat, Sun, 14& 15	97,835	1,076,285	71,753
January		2,225,781	71,471
February		1,879,360	67,120
March		2,215,658	71,482
April		1,627,683	60,923
May		2,150,831	69,382
June		2,046,486	68,283
July		1,897,809	61,802
August		2,118,647	68,343
September		2,140,295	71,343
October		2,383,707	76,894
November		2,4 3,307	80,777
December		2,4 9,617	78,052
Year, 1887		25 519,175	69,916

CHARTERS—TOTAL AND AVERAGE.

	Day.	Total.	Av'ge
Mon. Jan. 9	52,540	229,841	25,537
Tues. " 10	68,730	298,571	29,857
Wed. " 11	79,999	378,570	31,414
Thurs " 12	36,587	415,157	34,596
Frid. " 13	73,452	488,609	37,590
Sat. Sun. 14 & 15	5,555	494,164	32,944
January		1,085,312	35,010
February		881,729	31,491
March		1,101,075	35,518
April		1,551,219	51,720
May		1,519,361	49,012
June		1,228,538	40,951
July		1,343,444	43,337
August		1,647,254	53,138
September		1,302,513	43,417
October		1,411,578	45,542
November		1,120,709	37,357
December		1,011 933	32,655
Year, 1887		15,204,735	41,657

CHARTERS FOR THE WEEK.

The total charters for refined in bbls and cases, crude in bbls and cases, naphtha &c., during the week ending January 17 were as follows:

Refined, bbls	84,300
Refined, cs	478,000
Crude, bbls	21,900
Crude, cs	124,000
Naphtha, bbls	5,000
Residuum, bbls	
Lubricating	
Total, crude equivalent	342,577

CLEARANCES FOR THE WEEK.

During the week ending January 17, the clearances of petroleum, in gallons, from the port of New York were as follows:

Refined	2,218,763
Crude	987,680
Naphtha	254,000
Residuum	
Total	3,460,443

EXPORT STATISTICS.

The following table shows the total exports from the port of New York and from the United States, reduced to crude equivalent, in gallons, for the week ending Jan. 7; also, the total shipments to date, with comparisons with 1887:

Exports from New York for week ending Jan. 7	8,623,251
Total exports from New York from Jan. 1, 1888	8,623 251
Same period last year	7,440,557
Increase	1,182,694
Exports from U. S. for week ending Jan. 7	11,983,806
Total exports from U. S. from Jan. 1, 1888	11,983,806
same period last year	9,866,572
Increase	2,117,234

TOTAL EXPORTS FROM DIFFERENT PORTS.

	1888.	1887.
New York	8,623,251	7,440,557
Philadelphia	3,360,555	2,426,0.5
Baltimore		
Boston		
Grand total	11,983,806	9,866,572

CAPACITY OF VESSELS LOADING.

The following table gives the capacity of the vessels loading petroleum at the ports of New York, Philadelphia, Baltimore and Boston on January 16:

	NEW YORK. Bbls.	Cases.	PHILADELPHIA. Bbls	Cases.
Refined	120,800	395,000	27,300	270,000
Crude	37,400	187,000	27,000	73,000
Naphtha	6,000			
Total	164,200	582,000	54,300	343,000
	BALTIMORE. Bbls.	Cases.	BOSTON. Bbls.	Cases.
Refined	7,500			
Crude				
Naphtha				
Total	7,500			

Foreign Statistics.

REFINED QUOTATIONS

	Bremen	Antwerp.	London.
Wed, Jan. 11.	7.85	19½@—	7 @7⅛
Thur, " 12.	7.95	19½@—	7⅛@9¼
Fri, " 13.	8.05	19½@—	8 @9
Sat, " 14	8.05	19½@20	7⅛@9
Mon, " 16.	8.05	20½@—	7⅛@9
Tues, " 17.	8.35	21 @—	7⅛@9

STOCKS, RECEIPTS AND SHIPMENTS.

The stock at the seven principal continental ports on December 31, was:

	1887.	1886.
Stock, Dec. 31	306,779	361,540
Afloat "	227,921	245,451
Loading "	153,400	168,300
Total	688,100	778,291
Receipts Dec. 24 to Dec. 31	8,654	68,095
Re'ts July 1, '87, to Dec. 31,'87	2,353,375	2,187,655
Shipments Dec. 24 to Dec. 31	70,543	63,825
Shp's July 1, '87, to Dec. 31,'87	2,567,229	2,545,232

At London the stock on the same date was:

	1887.	1886.
Stock, Dec. 31	84,395	122,926

Exports of Petroleum from New York

REFINED.

COUNTRIES.	WEEK ENDING January 16. Gals.	Jan. 1 to Jan. 9. 1888. Gals.	Jan. 1 to Jan. 9, 1887. Gals.
Africa, Liberia		13,640	
Sierre Leone			
South Africa	48,300	24,450	10,290
Zanzibar			
Algiers			
Arabia			
Argentine Republic		86,000	61,900
Australia	4,800	430 640	76,400
Austria		14,155	
Belgium		450 000	1,177,246
Brazil	120,558	153,784	62,991
British East Indies, Aden			
Burmah			
India			427,790
Penang			
Singapore			
British Guiana	5,000		15,000
British West Indies, Antigua	2,750		
Barbadoes	5,150	5,000	5,000
Basse Terre	500		
Bermuda	7,111		
Domenica	2,550		60
Jamaica	32,305		20,500
Montserrat			
Nassau	250		
St. Lucia	1,000		
St. Vincent			
Trinidad	18,850		6,843
All others		5,000	
Canary Islands			
Central America, Belize			
Costa Rica	1,634		1,008
Guatamala			
Honduras			
Nicaragua			
San Salvador		1,000	
Chili			
China, Cochin			385,516
All other	1,000	1,173,000	423,500
Cuba	11,670	17,810	14,320
Danish West Indies	200		1,000
Denmark			
Dutch East Indies, Java	313,900		324,040
Macassar			
Sumatra			
Dutch West Indies	1,100	700	2,621
Dutch Guiana			
Ecuador		92,200	
England	422,454	2,049,694	1,223,200
Egypt			
France		160,685	258,210
French Guiana			
French West Indies	14,000	3 000	
Germany	903,486	2,062,483	
Gibraltar			
Greece			
Hawaiian Islands	6,042	2,250	1,970
Hayti			
Ireland			
Italy			
Japan	120		
Mexico	100	3,900	3,003
Malta			
Mauritius Island			
Netherlands		410 750	463,000
North America, New Brunswick		40,500	7,500
New Foundland		3,894	20,966
Nova Scotia		3,935	
Prince Ed. Island			
Norway and Sweden			
Peru	43,639		
Porto Rico	33,770	6,200	5,500
Phillippine Islands			
Portugal	90,168		
Reunion			
Russia			
Scotland			
Siam			
Spain			
Turkey			
U. S. of Col.	34,036	6,080	7,520
Uruguay	36,500		
Venezuela	35,580	19,153	28,111
Wales			
Total	2,218,763	7,189,303	5,035,950

CRUDE.

COUNTRIES.	WEEK ENDING January 16, Gals.	Jan. 1 to Jan. 9, 1888. Gals.	Jan. 1 to Jan. 9, 1887. Gals.
Australia			
Austria			
Belgium			
Brazil			
British Guiana			
British West Indies			
Chili			
Central America			
Cuba			198,110
Danish West Indies			
Dutch West Indies			
England			
France			445,087
Germany			
Hawaiian Islands			
Mexico		156,670	
British North America			
Norway & Sweden			
Spain	987,680	330 0	237,659
Uruguay		1,250	
Total	987, 80	487,260	880,956

NAPHTHA.

COUNTRIES.	WEEK ENDING January 16, Gals.	Jan. 1 to Jan. 9, 1888. Gals.	Jan. 1 to Jan. 9, 1887. Gals.
Africa			
Algiers			
Argentine Republic			
Australia			
Belgium			
Brazil			
British West Indies			
Central America			
Cuba			
Denmark			
England			125,940
France		15,887	75,726
Germany	264,000		
Hayti			
Ireland			
Mexico			
British North America			
Norway and Sweden			
Portugal			
Russia			
Turkey			
Uruguay			
Venezuela			
Total	264,000	15,887	201,666

Afloat "	....	78,378	25,800
Loading "	. ...	29,000	34,200
Total	....	191,773	185,936
Receipts Dec. 24 to Dec. 31	.....	5,023	18,174
Rec'e July 1, '87, to Dec. 31, '87.		420,970	318,572
Shipments Dec. 24 to Dec. 31.		11,803	11,778
Sap'ts July 1, '87, to Dec. 31, '87.		440,255	373,228

Petroleum Charters.

Following is a list of vessels chartered and oading or to load petroleum at New York, Philadelphia, Baltimore and Boston.

NEW YORK	Bbls. Refd
Nov 1	
It bk Roffo, Java or Straits, p t..... cs	30,000
Nov 18	
It bk Leonida, Corunna, 18c.....cs cde	21,000
Nov 19	
It bk ———, Java, p t ..... .cs	25,000
Nov. 22	
It bk Feliciano Antonio P, Saigon, p t..cs	30,000
Dec 3	
Am sh Hoogley, Singapore, o's acc....cs	35,000
Dec 9	
Am ship Exporter, Calcutta, 20c.....cs	50,000
Dec 13	
Am sh Katahdin, Shanghae, 30c.... ....cs	45,000
Br bk Cedar Croft, Marseilles, 3s 3d...cde	7,000
Dec 14	
Br bk Flora, Bilboa, 20c..... ... cs cde	20,000
Dec 16	
Aus bk Filadelfia, Alicante, 20c and 4s.... . .....cs cde 23,000 & cde	1,200
Dec 17	
Br bk Privateer, Marseilles or Cette, 3s 3d..... .....ode	5,500
Dec 19	
Ger sh Adorna, Continent, p t	9,000
Ger sh Anna, Continent, p t	7,000
Ger bk Leocadia, Continent, p t.....	5,000
Dec 20	
It bk Italia, Banzoon, 23c ... .cs	35,000
It bk Amor, Barcelona, pt. .....cde	3,500
Am bk Moonbeam, Barcelona, pt.....cde	4,200
It bk Rosa Madre, Valencia, 20c....cs cde	35,000
Ger bk Anna Aleida Java, pt .....cs	45,000
Dec 21	
Br bk John Hickman, Havre, 3s.....cde	7,500
Nor ship Havre, Ger Baltic, 2s 7d.....	5,000
Dec 27	
Br bk Avonport, U K, pt.....	6,000
Dec 30	
Br ship Gov Wilmot, Antwerp, 2s 7d	10,500
Jan 3	
Ger sh Mommsen, Cont, pt.....	7,500
Jan 4	
Br bk D H Morris, Sharpness, pt.....	7,800
Br bk R Hutchinson, Limerick, 3s 3d.. .	4,500
Ger bk Matthias, Cont, pt.....	6,500
Jan 5	
Nor bk Nina, Plymouth or Exmouth, 3s 4½d & 3s 6d..... .. ..nap 1 000 &	2,000
Br bk Unanima, Dublin, 3s 4½d.....	4,500
It bk Nord America, Valencia, 20c.cs cde	19,000
Nor bk Saga, U K, 3s 3d..	2,500
Nor bk Hosten, U K, pt	5,500
Jan 6	
Am bk Sontag, Padang, pt..... ....cs	34,000
Rus bk Felix, Dieppe, 3s 6d.....cde	6,000
Nor sh Orion, Danish port, pt..	6,000
Br bk Scotland, London, pt.....	9,500
Jan 9	
Br bk Transit, Java, pt .....cs	28,000
Nor bk Saron, Dunkirk, 3s 10½d....cde	3,000
Nor bk Milton, Dunkirk, 3s 1 3½d....cde	3,000
Br bk C W Janes, Manila, pt..... ....cs	30,000
Am sh W H Lincoln, Japan, pt.....cs	65,000
Jan 10	
Am bk Allanwilde, Corunna, 21c.....cs	22,000
Br bk Ranar, Continent, pt.....	6,000
Br bk Condor, Continent, pt.....	6,000
Am ship The Bruce, Calcutta, 20c..cs, cde	40,000
Nor bk Capt. Peter Dahl, U. K. o. Con., pt	3,500
Am bk Emma Crowell, Shanghae, pt.. cs	45,000
Jan 11	
Br ship Hadden Hall, Liverpool, 2s, 3d.	8,500
Ger bk Alber Reimann, Macassar, 40c...cs	8,000
Br bk Enchanter, Belfast, 3s, 3d.....	2,800
Br bk Wave Queen, U. K., 3s, 4½d.	2,000
Jan 12	
Br ship Warsaw, London, 2s, 9d and 3s nap. 5;000 &	3,000
Nor bk Folkfesten, St. Louis du Rhone. 4s..... .....cde	2,400
Jan 13	
Am ship Jacob E. Ridgeway, Saigon, 23c cs	65,000
Ger ship Andromeda, Bremen, cs-acc tank	13,000
Br bk Mary K. Chapman, Seville, 20c cs, cde	21,000
Br bk Scotia, Barcelona, 22½c.....cs, cde	25,000
Br bk Dunstaffnage, Java, 30c.....cs	30,000
Br bk Charity, Plymouth or Exmouth, 3s, 3d or 3s1½d.....	2,500
Jan 16	
Dutch bk Hortina Johanna, U. K. or Cont, pt	4,500
Nor bk Rex, Seville 21c.....cs, cde	18,000
Br bk Flora, Bilboa, pt..... .... cs	20,000
Br brg Moss Rose, Dublin, 3s6d.....	2,500
It bk Unione, Java, pt.....cs	28,000
Br ship Chas. S. Whitney, London, 2s3d, or Antwerp, 2s1½d.....	10,000
Br ship Monrovia, China or Japan, pt cs	60,000
Br ship Ny. Ghau, Java, pt ... .cs	45,000

PHILADELPHIA

Oct 22

wed bk Maria Margareta, Alicante, p t. cs..... ....ode 25, 000

Oct 31

Ger sh Derby, Rouen, 2s 6d.....cde 7,000

Nov 1

Br bk Aldora, Cont, pt..... 7 000

Nov 12

It bk Angela Accame, Macassar, 27c.. cs 25,000

Nov 16

Dutch bk Jan Melchers, Dutch port, 2s 6d 9,000

Nov 17

sh Avoca, Calcutta, 18c.....cs 45,00

Nov 18

Am bk Silicon, Passages, 20c .....cs cde 11,000

Nov 19

Ger sh Union, Bremen or Hamburg, 2s 4d 7,500

Nov 23

Br sh Otago, Dunkirk, 3s 6d & 3s 9d, cde 4,000.....nap 2,000

Nov 29

It bk Antonio d'Abundo, Seville, p t..... 1,500

Br str Yaxford, 2 ports w coast Italy, 22½c..... .....cs 60,000

Dec 5

Aus bk Superbo, Rouen, 2s 9d ... .cde 3,000

Dec. 8

Br sh Annie M Law, Dunkirk, 3s 6d...cde 7,000

Dec 13

Br bk Abyssina, Japan, 27 & 28½c..... cs 45,000

Br brg Trust, Bilboa, 21c.....cs cde 18,000

Dec 14

Br bk Towy, Oporto, 3s 10½d.. 2,000

Dec 27

Am bk Don Justo, Spanish port, 22c.cs cde 28,000

Dec 28

Br str Threpton, Patras or Piraeus, 23c.cs 50,000

Dec 29

Am ship Guy C Goss, Japan, pt .... ..cs 55,000

Jan 3

Dtch bk Helena, Rouen, 3s.....cde 8,000

Jan 6

Am sh Tillie E Starbuck, Japan, pt....cs 70,000

Jan 9

Nor bk Elektra, Adriatic, pt.....cs 20,000

Jan 10

Br str Longhurst, Rouen, 3s 6d .....cde 10,000

Jan 11

Ger sh Frederike, Continent, p t..... 9,000

Am sh P N Blanchard, Japan, p t ..... cs 50,000

Am sh Ellen A Read, Japan p t .....cs 70,000

Br bk Arthur, Waterford, 3s 3d 2,800

Jan 12

Nor bk Alf, Lisbon, 3s 6d..... 2,500

Br bk Byrn Ivor, Lisbon, 3s 6d..... 2,500

Br sh Rialto, Calcutta, 22½c ....cs 55,000

Ger bk Carl Friedrich, Dunkirk, p t..cde 3,000

Jan 13

Sp str Espanol, Dunkirk, 3s 9d ..... .cde 6,500

BALTIMORE.

Nov 12

Ger bk Louise and Augusta, Hamburg, p t..... 7,000

Nov 26

Swed bk Sidney, Elsinore, 2s 9d... 3,500

It bk Teresa Lo Vico, Palermo, p t..... 3,500

Nov 17

Am sh Mindoro, Manila, o's acc.....cs 30,000

Jan 14

Swed bk Sydney, Ger Baltic, 2s 9d..... 3,50

Clearances of Petroleum.

Following are the clearances of petroleum from the ports of New York, Philadelphia, Baltimore, Boston and San Francisco on the dates named. Refined, unless otherwise specified—

NEW YORK

Jan 10.

Am str Colon, Colon, 300 cs
Am str Philadelphia, La Guaygra, 50 cs
Am str Philadelphia, Maracaibo, 10 cs
Am str City of Alexandria, Progreso, 10 cs
Am str Santiago, Nassau, 25 cs
Am str Santiago, St Jago, 207 cs
Am str Santiago, Cienfuegos, 100 cs
Am bg Telos, Aquadilla, 200 cs
Am bg Telos, Ponce, 600 cs
Am bk Daylight, Pt Spain, 300 cs
Am sch W A McKay, Jacmel, 55 cs
Br str Muriel, St Croix, 20 cs
Br str Trinidad, Hamilton, 30 bbls, 77 pgs, 30 cs
Br str Portuense, Ceara, 150 cs
Br str Portuense, Para, 11 bbls, 1850 cs
Br str Portuense, Pernambuco, 6000 cs
Ger str Hans and Kurt, Hamburg, 900000 gls blk
Nor bg Hardi, Oporto, 1340 bbls, 2000 cs

Jan 11

Am bk Reindeer, St Pierre, 500 cs
Am sch J T Matheson, Roseau, 255 cs
Am sch J R Talbot, Arroyo, 12 cs
Br str Alvo, Pt Limon, 19 bbls 10 cs
Br str Albo, Carthagena, 702 cs
Br str Alvo, Savanilla, 49 pgs
Br str Alvo, Kingston, 52 bbls 1288 cs
Br str Alvo, Lucean, 20 cs
Br str Alvo, Pt Antonio, 35 cs
Br str Alvo, St Anns Bay, 20 cs
Br str Alvena, Aux Cayes, 2 bbls 137 cs
Br str Alvena, Gonaives, 25 cs
Br str Alvena, Jacmel, 29 cs
Br str Alvena, Jeremie, 100 cs
Br str Alvena, Pt au Prince, 10 bbls, 142 cs
Br bk Culdoon, East London, 3750 cs
Br Bgt Tasma, Santos, 4000 cs
It bk Padre, Farragona, 21600 gls, ode

(Continued on page 37.)

Petroleum in 1887 Boiled Down.

The statistical history of the year 1887 is summed up by the *Derrick* as follows:

1. The net stocks in the region were decreased during the year 5,010,786 bbls, equal to a daily average of 13,738 bbls.

2. The pipe line runs from all districts in New York and Pennsylvania, and including Macksburg, Ohio, decreased at the rate of 9,258 bbls a day.

3. The shipments from the region were 1,862 barrels greater than those of the preceding year.

4. The consumption of American petroleum exceeded the production by 12,246 barrels a day.

5. The number of productive wells completed in 1887 was 1,677 less than those in 1886, and the dry holes 157 fewer in number than in 1886.

6. The highest price for oil certificates in 1887 was 2½c less than the highest price in 1886, and the lowest price was 5⅝c below the bottom figures of 1886.

7. The average price for 1887 was 4½c less than the average price for 1886 and 11⅞c less than the average price for 1885.

Summaries of the Pipe Line Statements for December.

We are enabled to present the official reports of the different pipe line companies. Below will be found a statement of the total deliveries from each line in the months of November and December, 1887:

	Nov.	Dec.
Tidewater Pipe Co..	207,631 04	300,459 16
Octave Oil Co.....	1,187 50	2,340 73
National Transit 2,168,203 46		2,179,410 27
Pittsburg Pipe Line.....	46,815 27	50,622 81
Macksburg Pipe Line...	34,508 15	39,654 05
Southwestern Pa. P L..	33,816 19	16,841 60
West'n & Atlantic P. L.	27,854 35	51,509 13

COMPARATIVE STATEMENT OF SHIPMENTS.

The following is a comparative statement of the deliveries during each month in the years 1884, 1885, 1886 and 1887:

	1884.	1885.	1886.	1887.
January ...1,686,621	1,836 138	2,051,680	2,30',272	
February..1,723 260	1,910,045	2,032,794	1.993,126	
March.....1,873,890	1,891,792	2,055,730	2,3 2,2.9	
April 1,643,336	1,842,800	2,097,404	1,949,459	
May.....1,899,330	2,097,419	2,027,460	2,289,455	
June.....1,977,501	2,034,025	2,165,688	2,181,149	
July 1,872,819	2 130,087	2,246,485	1,911,918	
August 2,101,627	2,049,099	2,269,716	2,242,185	
September.2,293,247	2,136,175	2,378,502	2 364,625	
October.. .2,515,466	2,075,259	2,433.501	2,610,986	
November.2,084,746	1,895,011	2,71?,364	2.49 : 891	
December..2,382,059	2,188,254	2,542,389	2,640,839	
Total... 24,154.002	24,086,104	27,013,716	27,347 998	

The following exhibits the stock held by each of the pipe line companies at the close of December, together with the gross receipts from all sources during the month:

	Stocks.	Receipts.
Tidewater Pipe Co	1,281,531 22	116,986 79
Octave Oil Co	2,577 66	2,588 12
National Transit.....26,150,737 69		919,953 65
Macksburg Pipe Line...	401,382 03	17,079 08
Southwestern Pa. P L..	340,543 67	145,534 00
Pittsburg Pipe Line....	159,159 36	49,785 99
West'n & Atlantic P. L.	41,180 30	47,545 29

The following table exhibits the stock held by all pipe lines at the close of each month during the last four years:

	1884 Stock	1885 Stock	1886 Stock	1887 Stock
Jan....	35,834,930	36,693,111	33,608,364	32,574,989
Feb. ...	35,041,914	36,316,806	33,180,057	32,473,612
March..	36,206,626	36,067,905	33,053,140	32,232,310
April...	37,726,877	36,021,746	32,946,618	32,358,442
May....	38,475,528	35,460,127	33,059,909	32,077,638
June...	38,665,848	35,103,278	23,305,775	31,921,828
July....	38,986,248	34,887,330	33,462,230	32,014,326
Aug...	39,083,464	34,496,800	33,833,632	31,729,292
Sept....	38,740,723	34,087,338	34,081,064	31,423,863
Oct	38,123,745	33,903,544	34,031,462	30,906,810
Nov....	37,857,193	33,794,358	33,733,796	29,655,4:8
Dec ...	36,872,892	33,539,038	33,367,898	28,357.112

AVERAGE DAILY RUNS.

The following exhibits the average daily runs in each month in 1884. 1885, 1886 and 1887:

	1884	1885	1886	1887
January..	58,913	53,298	58,186	63,827
February.....	67,078	54,997	57,741	64,392
March.....	66,203	54,089	62,555	65,012
April	65,814	60.290	66,366	66,065
May....	66,713	57,141	70,670	65,509
June.....	67,357	59,907	79,545	64,399
July.....	66,201	57,299	78,935	60,460
August.....	66,492	54,778	85,502	60,326
September	66,059	58,718	79,620	62,964
October.....	63,071	63,122	77,533	62,494
November ...	61,758	60,903	72,146	40,242
December	61,749	63,270	69,166	41,918

Summary of report of National Transit Company at close of business Dec. 31, 1887:

Gross stocks.....		29,410,666 53
Sediment and surplus.....		3,259,928 84
Acceptances, etc.....	19,212,036 33	
Credit balances.....	6,938,701 36	
Total liabilities....		26,150,737 69
RECEIPTS.		
Runs from wells....	919,953 65	
Rec'd from other lines.	367,061 62	
		1,287,015 27
SHIPMENTS.		
Regular shipments.....2,179,410 27		
Delivered to other lines..	28,879 20	
Total deliveries.....		2,208,289 47

Summary of report of Tidewater Pipe Company at close of business Dec. 31, 1887:

Gross stocks.....		1,435,028 79
Sediment and surplus.....		153,497 57
Acceptances, etc.....	627,000 00	
Credit balances	654,531 22	
Total liabilities.....		1,281,531 22
RECEIPTS.		
Receipts from wells....		116,986 79
Receipts from other lines.		28,879 20
Total receipts.....		145,865 99
TOTAL DELIVERIES.		
To refineries...	300,459 16	
To other parties..... ...	000,000 00	
Total deliveries		300,459 16

Summary of report of the Western & Atlantic Pipe Lines at close of business Dec. 31, 1887:

Stocks iron tanks Dec. 1.....		47,650 48
Rec'd from wells Dec..... ...		47,545 29
		95,295 77
Deliveries in December..... .		51,509 13
		43,786 64
Stocks Jan 1, 1888, iron tanks		39,180 30
Estimated in lines...		2,000 00
Shrinkage.....		2,606 34
Gross stocks.....		43,786 64

OUTSTANDING CERTIFICATES.

The following table exhibits the amount of oil in the National Transit represented by outstanding certificates and other vouchers at the close of each month in 1885, 1886 and 1887:

	1885.	1886.	1887.
Jan 31....27,626,592 54	27,567,041 53	22,566 039 08	
Feb 29....26.894,042 14	26,694,037 53	22,401,039 08	
Mar 31....27,417.675 12	26,686,037 58	22.472,039 08	
Apr 30....27,474,098 56	25,679,037 53	22,428,036 33	
May 31....26,864,600 44	25.570,037 53	22,091,036 33	
June 30 ..27,793,381 72	24,889,259 78	21,697,036 33	
July 31 ..27,562,638 85	25,241,961 38	20,911,036 33	
Aug 31. ..27,571,587 22	24,982,510 58	21,030,036 33	
Sept 30...27,750,469 23	25,110,087 78	20,950,036 33	
Oct 31... 28,270,229 17	24,836,576 08	20,844,036 33	
Nov 30...28,191,569 88	23,964,801 48	20,850,036 33	
Dec 31...27,838,035 03	23,881,037 98	19,212,036 33	

The following tables, exhibiting the condition of the Franklin and Buckeye pipe lines at the close of Dec. is entirely independent of other pipe line reports and is not counted in the stocks and averages noted above:

FRANKLIN PIPE CO.

	Runs.	Shipments.	Stocks.
October.....6,707 18	11,997 98	18 535 95	
November....6,670 40	5 698 27	21,508 08	
December....6,227 68	9,155 70	18,580 06	

BUCKEYE PIPE LINE CO.

Credit balances....		4,148,464 86
Total liabilities..		4,148,464 86
Gross stocks.... ....4,188,054 09		
Sediment, etc....	39,585 23	
Net stocks		4,148,464 86
Receipts		486,703 95
Deliveries..		76,327 06

Statement made Dec. 10, 1887, relating to business of various Pipe Lines for November, 1887.

	Total Liabilities.	Gross Stocks.	Sediment & Surplus.	Runs from wells.	Other Receipts.	Regular Deliveries.	Other Deliveries
National Transit Co.....	27,677,138 48	30,446,606 37	3,363,467 89	829,071 25	422,560 79	2,168,203 46	15,694 84
Southwest Pa. P. Lines....	134,262 04	572,383 17	88,091 00	167,508 97	.....	.....	374,974 72
The Macksburg Pipe Line Company..	436,957 00	415,450 99	18,463 99	19,901 83	.....	.....	.....
	28,038,357 56	31,434,440 53	3,470,022 97	1,016,480 05	422,560 79	2,168,203 46	390,669 56
Increase.....	1,139,724 17	1,248,987 24	111,563 07	75,096 68	55,505 17	619 88	45,341 55
Decrease.....							

Statement made Jan. 10, 1887, relating to business of various Pipe Lines for Dec., 1887.

	Total Liabilities.	Gross Stocks.	Sediment & Surplus.	Runs from wells.	Other Receipts.	Regular Deliveries.	Other Deliveries
National Transit Co.....	29,150,737 69	29,410,666 53	3,259,928 84	919,953 65	367,061 72	2,179,410 27	28,877 20
Southwest Pa. P. Lines....	346,545 67	878,253 38	31,749 71	145,531 00	.....	16,843 60	316,438 81
The Macksburg Pipe Line Company..	404,382 03	431,163 38	16,781 35	17,079 08	.....	39,654 05	.....
	29,901 665 30	30,910,153 29	3,308,459 90	1,082,564 73	367,061 72	2,235,907 92	345,316 01
Increase.....	1,763,292 26	1,523,487 24	161,469 07	66,483 68	39,500 55	382,296 46	45,353 55
Decrease.....							

Statement made Dec. 10, 1887, relating to business of various Pipe Lines for November, 1887.

	Total Liabilities.	Gross Stocks.	Sediment & Surplus.	Runs from wells.	Other Receipts.	Regular Deliveries.	Other Deliveries
National Transit Co.....	27,677,138 48	30,446,606 37	3,363,467 89	829,071 25	422,560 79	2,168,203 46	15,694 84
Southwest Pa. P. Lines....	134,262 04	572,383 17	88,091 00	167,508 97	.....	.....	374,974 72
The Macksburg Pipe Line Company..	436,957 00	415,450 99	18,463 99	19,901 83	.....	.....	.....
	28,038,357 56	31,434,440 53	3,470,022 97	1,016,480 05	422,560 79	2,168,203 46	390,669 56
Increase.....	1,139,724 17	1,248,987 24	111,563 07	75,096 68	55,505 17	619 88	45,341 55
Decrease.....							

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IMPORTS, EXPORTS, DOMESTIC RECEIPTS, Etc

IMPORTS ENTERED AT NEW YORK FOR CONSUMPTION,

DURING THE WEEK ENDING JANUARY 14.

ACID ARSENIC—1 ck, 600lb, R Holliday's Sons, C of Richmond Liverpool
CARBOLIC—40 dms, J P Barnett, Republic, Liverpool
39 pgs, 7863lb, F J Macnaughtan, Bothnia, L'pool
20 cs, 2000lb, Schering & G, Suevia, Hamburg
PYRO—3 cs, 150lb, Schering & G, Suevia, Hamburg
SAL—15 bbls, 9 cs, Schulze-Berge & K, Switzerland, A'w'p
ALBUMEN—100 cs, 22000lb, Pickhardt & K, P de Coninck, Ant'p
1 cs, 312lb, A Klipstein, Suevia, Hamburg
ALIZARINE—40 cks, 16184lb, Pickhardt & K, Leerdam, R'dam
90 pgs, 37620lb, Lutz & M, Suevia, Hamburg
ALOES—140 bxs, 11188lb, Foulke & Co, G B Lockhart, Curacoa
ALUM—31 cks, 22434lb, A Klipstein, P de Coninck, Antwerp
ALUMINIUM—1 cs, 86lb, C T White & Son, Elbe, Bremen
AMMONIA CARB—100 cks, 21280lb, Mills & Oates Co, Egypt, L'p
MURI—30 cks, 31120lb, J L & D S Riker, Egypt, L'pool
SAL—40 cks, 52700lb, J L & D S Riker, Egypt, L'p'l
ANILINE COLORS—27 cks, 7311lb, R Holliday's Sons C of Richmond, Liverpool
64 pgs, 6400lb, Sykes & S, Normandie, H're
6 pgs, Pickhardt & K, Elbe, Bremen
130 pgs, 15780lb, Lutz & M, Suevia, H'burg
35 pgs, Pickhardt & K, Leerdam, R'dam
2 pgs, 100lb, Lutz & M, Switzerland, A'w'p
11 pgs, Schulze Berge & K, Switzerland, Antwerp
31 pgs, 3300lb, W J Matheson & Co, Werra, Bremen
OIL—10 dms, 1160lb, Hensel, B & L, Noordland, Antwerp
SALT—20 cs, Schulze-Berge & K, Switzerland, Antwerp
2 cks, 991lb, Sykes & S, Normandie, Havre
ANNATTO SEED—18 bbls, 2977lb, A S Lascelles & Co, Alene, K'n
ANTIMONY—200 cks, 144400lb, E Hill's Son & Co, Otranto, N'c'le
20 cks, Phelps, Dodge & Co, Denmark, London
34 cks, Dickerson, Van D & Co, Denmark, London
CROCUS—20 cks, J Swift, Bothnia, Liverpool
ARGIL—25 cks, 10389lb, Sykes & S, Normandie, Havre
ARGOLS—250 bgs, 56780lb, N Y Tartar Co, Egypt, Liverpool
ARSENIC—150 cks, 58800lb, A S Ansbacher & Co, B City, Bristol
30 cks, C De P Field, Brooklyn City, Bristol
RED—300 kgs, 26236lb, Schering & G, J Drummond, H'g
ASPHALT—390 bbls, 12440lb, G Christel, Cameo, Trinidad
ASPHALTUM—35 bgs, 10047lb, Perkins & Co, Niagara, Havana
BALSAM COPAIBA—1 cs, 80lb, Thebaud Bros, El Callao, C h'vr
10 cks, 3795lb, A A Stilwell, Egypt, L'pool
CRUDE—8 cs, 637lb, Stallman & F, Marsala, Hamburg
TOLU—17 cs, 1622lb, D A DeLima & Co, Alene, B'quilla
BARIUM CHLO—1 ck, Pickhardt & K, Leerdam, R'dam
BELLADONNA LEAVES—16 bls, 2646lb, Peek & V, India, Trieste
BLEACH—96 cks, 113107lb, Wing & Evans, Wyoming, L'pool
90 cks, 111731lb, Wing & Evans Egypt, L'pool
97 cks, 111500lb, J L & D S Riker, Egypt, L'pool
43 cks, 55240lb, Sutherland, I & Co, Egypt, Liverpool
57 cks, 7553lb, Perkins, G & Co, Wyoming, Liverpool
202 cks, 236940lb, E Hill's Son & Co, Otranto, N'castle
BLUE—5 cks, H Kohnstamm & Co, Denmark, London
BONES—1 bg, 15lb, C Oertel, B Yglesias, Vera Cruz
BRIMSTONE—250 tons, J L Morgan & Co, Venice, Girgenti
300 tons, T & S C White, Venice, Girgenti
400 tons, Parsons & Petit, Venice, Girgenti
100 tons, Battelle & Renwick, Venice, Girgenti
BRONZE POWDER—7 cs, G H Barbey, Suevia, Hamburg
9 cs, E Ehrmann, Elbe, Bremen
7 cs, Sondheim, A & Co, Elbe, Bremen
34 cs, 137.8lb, J Marsching & Co, Elbe, Bremen
16 cs, Gerstendorfer Bros, Elbe, Bremen
BURDOCK—50 bls, 5500lb, J Clay, Leerdam, R'dam
BUTTON LAC—100 cs, 24258lb, N Y Shellac Co, W H Lincoln, C'a
100 cs, 24840lb, N Y Shellac Co, W H Lincoln, C'cuta
CACAO BUTTER—10 cs, 2240lb, A E Reiman, Denmark, London
CARAMEL—20 cks, 13190lb, V Loewi, Thingvalla, Stettin
CARDAMOMS—5 cs, 846lb, R Hillier's Son Co, Denmark, L'don
CASSIA—100 cs, H W Henning & Son, J Drummond, H'burg
504 pgs, 114168lb, H W Henning & Son, P F Blanchard, Hong Kong
CEMENT—749 cks, Bajer & M, J Drummond, Hamburg
750 cks, H Fleming, L Hill, London
600 cks, Sanderson & Son, Otranto, Newcastle
2500 cks, Bajer & M, Otranto, Newcastle
1560 bbls, Neuss Hesslein & Co, Marsala, Hamburg
30 bgs, J T Kirby, Marsala, Hamburg
700 cks, H Fleming, Denmark, London
750 cks, Hammill & G, Otranto, Hull
560 cks, E Thiele, Marsala, Hamburg
CHAMOIS—1 cs, Lasker & B, Denmark, London
2 bls, A Isaacs & Co Bothnia, L'pool
CHEMICALS—35 cs, T Weicker, Schiedam, A'dam
28 cks, 16530lb, Pickhardt & K, Leerdam, R'dam
1 cs, 12lb, Dodge & Olcott, Normandie, Havre
60 cks, 22325lb, A Klipstein, Marsala, Hamburg
2 cs, Lehn & Fink, Denmark, London
4 cs, Lehn & Fink, Suevia, Hamburg
3 cs, Schering & Glatz, Suevia, Hamburg
2 cs, T Weicker, Catania, Hamburg
3 cs, Lehn & Fink, Marsala, Hamburg
CHINCHONA BARK—3 bls, 642lb, M Koenigsheim, Denmark, L'n
CINCHONIDIA—1 cs, 280 ozs, Roessler & H, Suevia, Hamburg
CLAY—11 cks, 12060lb, L Bertsch, Elbe, Bremen
CLOVES—1 cs, 193lb, Bennett, S & P, Denmark, London
COBALT—1 pg, McCoy & Sanders, Elbe, Bremen
OXIDE—1 cs, Roessler & H, Suevia, Hamburg
COCHINEAL—1 bls, H Kohnstamm & Co, Denmark, London
COLORS—1 cs, A Sartorius & Co, Normandie, Havre
10 cks, Pickhardt & K, Elbe, Bremen
3 cs, J M Huber, Elbe, Bremen
1 cs, D Weill, Normandie, Havre
5 cs, C T Raynolds & Co, Denmark, London
11 pgs, 561lb, Pickhardt & K, Leerdam, Rotterdam
4 cs, Sykes & Street, Normandie, Havre
3 cks, 1400lb, W Pickhardt & K, Suevia, Hamburg
2 cs, 161lb, J Marsching & Co, Republic, L'pool
CORKS—7 bls, J Robinson & Co, L Hill, London
2 bls, F Llado & Co, Anchoria, Glasgow
SQUARES—4 bls, F Llado & Co, Anchoria, Glasgow
CORKWOOD—900 bls, 140454lb, J Robinson & Co, G Castagliola, Lisbon
300 bls, Truslow & Co, Union, Lisbon
25 bdls, 3576lb, L Johnson & Co, Saga, Lisbon
CUDBEAR—4 cks, 2434lb, Levenstein, C & Co, Egypt, L'pool
15 cks, Stamford Mfg Co, Denmark, London
CUTCH—100 bgs, 15200lb, O S Janney & Co, J E Ridgeway, C'ta
DANDELION—15 bls, 3120lb, J Clay, Leerdam, R'dam
DEXTRINE—300 bgs, 61992lb, C Morningstar & Co, Taingvalla, Stettin
DRUGS—6 cs, 323lb, Dodge & Olcott, Normandie, Havre
3 bls, R Hillier's Son Co, Denmark, London
6 cs, E Fougera & Co, Wyoming, L'pool
DUTCH METAL—1 cs, J Marsching & Co, Elbe, Bremen
DYEWOOD EXT—9 cks, 1270lb, Giesenheimer & Co, Republic, L'l
15 cks, 3520lb, Sykes & S, Normandie, Havre
3 cks, Schoverling, D & G, Normandie, Havre
FISH SOUNDS—11 cs, 884lb, H Martin, Denmark, London
FLOCKS—26 bls 1300lb, H Kohnstamm & Co, Normandie, Havre
FULLERS EARTH—22 tons, A De Ronde & Co, Brooklyn City, Bristol
5 tons, R Hillier's Son Co, Denmark, L'don
70 tons, Hammill & G, Denmark, London
GALLS—57 bgs, 10710lb, G B Morewood & Co, Denmark, London
GAMBIER—2441 bls, 680686lb, J H Recknagel, Transit, S'pore
3379 bls, 1068360lb, Bidwell & F, Henrietta, S'pore
2053 bls, 489 89lb, J R Townsend & Co, Henrietta, S'p'e
957 bls, 244626lb Cooper Smith & Co, Transit, S'pore
519 bls, 115976lb, G B Morewood & Co, Henrietta, Singapore
GELATINE—10 cs, J P Smith, Denmark, London
5 cs, 560lb, A E Reiman, Denmark, London
GENTIAN ROOT—59 bls, 15299lb, W E Ebbett, C of Richmond, M's
GINGER—500 bgs, 56000lb, G Ropes, W H Lincoln, Calcutta
14 bbls, 2250lb, A S Lacelles & Co, Alene, Kingston
GLASS CATHEDRAL—10 bxs, 6347lb, Vanhorne, G & Co, Anchoria, Glasgow
GROUND—1 cs, P Semmer & Co, Republic, L'pool
MIRROR—46 cs, 22734 ft, Bendit, D & Co, Leerdam, R'dam
25 cs, 12898 ft, A Arnstein & Co, Leerdam, R'dam
32 cs, 16795 ft, S Binswanger & Co, Leerdam, R'dam
PLATE—5 cs, 3807 ft, Holbrook Bros, Republic, L'pool
25 pgs, Heroy & Marriner, Republic, L'pool
55 cs, 17203 ft, H H Cahn, Noordland, Antwerp
2 cs, 533ft, T W Morris & Co, Noordland, Antwerp
38 cs, 17542 ft, J A Waller, Republic, L'pool
32 cs, 8164 ft, J Cahn, Republic, L'pool
32 cs, 16857lb, Semon Bache & Co, S of Indians, Glasgow
2 cs, 458 ft, P Semmer & Co, Republic, L'pool
2 cs, 1012lb, S Bache & Co, Otranto, Newcastle
WINDOW—197 cs, 19100lb, J F Heyne, Noordland, A'p
162 cs, 10530lb, J F Heyne, P de Coninck, A'p
40 bxs, 6501 lbs, Holbrook Bros, Republic, L'l
GLUCOSE—50 cks, 51636lb, V Loewi, Thingvalla, Stettin
GLUE—20 cks, 12027lb, Townsend & B, C of Richmond, L'pool
336 pgs, 31360lb, A K Gardiner, Brooklyn City, Bristol
1 hhd, 1190lb, Gleason Mfg Co, Bothnia, L'pool
2 bgs, 241lb, S Isaacs & Co, Mineola, Bristol
20 pgs, 1875lb, S Isaacs & Co, Leerdam, Rotterdam
8 cs, 1820lb, P Lawrence, Republic, L'pool
4 cks, 1912lb, A M Reiman, Denmark, London
200 bgs, 22400 lbs, Milligan & H Glue Co, B City, Bristol
GLYCERINE CDE—34 cks, 37207lb, L Straus & Co, Normandie, Havre
107 pgs, 53666lb, Marx & Rawolle, Normandie, Havre
50 pgs, 55075lb, Hensel, B & L, Egypt, L'p'l
REF—21 cs, 1770lb, Schering & G, Suevia, H'burg
23 cs, 1229lb, G Borgfeldt & Co, India, Trieste
GOLD SIZE—8 cs, 220 gls, Pomeroy & F, Denmark, London
GREASE—36 bbls, 16234lb, W H Dumont & Co, J Drummond, Hamburg

GUANO—475 tons, B F Folsom, G B Lockhart, Curacoa
GUM ARABIC—15 cs, 4445lb, Thurston & B, Bothnia, L'pool
20 cs, 5400lb, J Clay, Bothnia, L'pool
50 cs, 14942lb, J Z pcy, India, Trieste
CHICLE—40 bgs, L Monjo Jr & Co, C of Atlanta, Tuxpan
139 bgs, 23809lb, J W Wilson & Co, C of Atlanta, V Cruz
COPAL—200 cs, 40300lb, E Hill's Son & Co, Henrietta, S'p'e
1033 cs, 209913lb, L C Gillespie, Transit, Singapore
294 cs, 59388lb, J R Townsend & Co, Henrietta, Singap'e
57 pgs, 11793lb, Colt, Ogden & F, Leerdam, R'dam
GHATTI—1 hhd, 959lb, Tellado G & Co, Niagara, Havana
KAURI—581 cs, 145600lb W C Pope & Bro, C W Janes, A'd
OLIBANUM—83 cs, 20832lb, G B Morewood & Co, Denmark, London
SENEGAL—75 bgs, 15500lb, Thurston & B, Bothnia, L'pool
SUB—10 cks, 18787lb, Baldwin Bros & Co, S of Indiana, G'w
TRAG—13 cs, 1412lb, H Kohnstamm & Co, Germanic, L'pool
TUNO—21 pgs, 2695lb, De Long, M & Co, Hondo, Ruatan
GYPSUM—39 cks, 22110lb, J L & D S Riker, Wyoming, L'pool
INDIAN RED—10 kgs, G W Sheldon & Co, Colorado, Hull
INDIGO—32 chts, 9750lb, Whitney Bros & Co, Denmark, London
20 ser, 3000lb, Eggers & H, Newport, Acajutla
7 ser, 1183lb, F Probst & Co, Newport, Aspinwall
4 ser, 600lb, E Westervelt, Newport, Aspinwall
EXT—13 pgs, 9397lb, Pickhardt & K, Denmark, London
INSECT POWDER—70 kgs, 8770lb, Thurston & B, Bothnia, L'pool
IRISH MOSS—20 bls, 2250lb, Stallman & F, Suevia, Hamburg
IRON OXIDE—113 pgs, 8012lb, H E Williams, India, Trieste
ISINGLASS—6 bls, H Kohnstamm & Co, Port Augusta, Kobe
KREMNITZ WHITE—7 pgs, 3365lb, J M Huber, India, Trieste
LANOLINE—11 cs, 1100lb, Lutz & M, Suevia, Hamburg
LEECHES 2 cs, F Paturel & Co, Normandie, Havre
LICORICE ROOT—7176 bls, 2114381lb, J C McAndrew & F, Italia, Scala Nova
1694 bls, 201300lb, F M Arguimbau, Runnovato, Alic,e
LINSEED—6570 bgs, 19208 bu, A W L & L S O l Co, Denmark, L'n
LITHARGE—25 kgs, 2800lb, J Lee Smith & Co, Exeter City, N'e
LOGWOOD—495 tons, Kunhardt & Co, J H Crandon, St Marc
670000 lbs, T H Messenger & Co, M Abbott, Gonaives
13 tons, H Kelly, Julien, San Domingo
434000lb, W & A Leaman, Fairfield, Gonaives
77900lb, H Kainer & Co, River Garry, Pt de Paix
MADDER—5 cks, N Y Dye Ext & C Co, Leerdam, Rotterdam
10 cks, 12876lb, Innis & Co Leerdam, R'dam
5 cks, 6534lb, C C Abel & Co, Leerdam, Rotterdam
MAGNESIA CARB—25 cs, 2500lb, G A & E Meyer, Exeter City, N'e
MAGNESIUM—1 cs, 2 lb, C T White & Son, Elbe, Bremen
MANGANESE OXIDE—1 cs, 115lb, Roessler & H, Suevia, H'burg
MANURE—50 tons, Wilkinson & Co, S of Indiana, Glasgow
MUSK—1 cs, Young, L & C, Galila, L'pool
1 cs, 818 ozs, Hensel, B & L, Suevia, Hamburg
NUTMEGS—69 bxs, 10184lb, Packard & J, Leerdam, R'dam
1 cs, 253lb, Bennett, S & P, Denmark, London
OCHER—5 bbls, 3519lb, G W Sheldon & Co, Anchoria, Glasgow
19 bbls, 10379lb, A Keppelman, Normandie, Havre
6 cks, 10000lb, Pomeroy & L, Denmark, London
OIL ALMOND—5 cs, 150lb, Dodge & O, Normandie, Havre
CITRONELLA—50 cs, 2363 lbs, E Hill's Son & Co, Henrietta, Singapore
CODLIVER—25 bbls, F Paulsen & Co, Colorado, Hull
FUSEL—12 cks, 3200lb, C Cooper & Co, Leerdam, R'dam
LAVENDER—5 cs, 500lb, Dodge & O, Normandie, Havre
LEMON—2 cs, 209lb, A E Reiman, Denmark, London
LINSEED—5 gls, C T Raynolds & Co, Denmark, London
NUTMEG—10 cs, 157lb, A A Stillwell, Henrietta, Singap'e
OLIVE—10 cks, 500 gls Liebman & B, Alexandria, L'horn
25 cks, W Haaker Co, Denmark, London
PALM—14 cks, 13850lb, T M Marc, Republic, L'pool
POPPY—5 gls, C T Raynolds & Co, Denmark, London
RAPE—25 bbls, 1227 gls, W Warden & Son, Denmark, Lond'n
ROSE—6 cs, 1024 ozs, L Bernard & Co, Normandie, Havre
SASSAFRAS—1 cs, 63lb, Thebaud Bros, El Callao, C B'var
OPIUM—2 pgs, 8 lb, Ng Wo, Abyssinian, Hong Hong
ORANGE LEAD—15 pgs, 2,952lb, J Lee Smith & Co, Exeter City, Newcastle
32 cks, 23460lb, J M Huber, Leerdam, R'dam
50 cks, 39562lb, Pfeiffer & L, Leerdam, R'm
35 cks, 19979lb, G A & E Meyer, Leerdam, R'dam
25 cks, 15144lb, J L Smith & Co, Otranto, N'c'l
PEPPER—1542 bgs, 213641lb, J H Rechnagel, Henrietta, S'pore
999 bgs, 145791lb, Bidwell & F, Henrietta, Singapore
449 bgs, 67522lb, C Merkel', Henrietta, Singapore
451 bgs, 58484lb, J R Townsend & Co, Henrietta, Singapore
PERFUME—30 cs, 1 6 gls, Park & Tilford, Normandie, Havre
9 cs, 83 gls, F R Arnold & Co, Denmark, London
PERUVIAN BARK—34 bls, J A Pauli & Co, Alene, Barranquilla
PIMENTO—50 bgs, 8116lb, A S Lascelles & Co, Alene, Kingston
108 bgs, 17280lb, Balz & Wakeman, Alene, Kingston
PITCH—16 cks, 21188lb, D Rosenberg & Sons, Denmark, London
PLASTER—4 cks, 1106lb, W H Hirsch, Marsala, Hamburg
PLUMBAGO—86 bbls, 5899lb, J B Potter, M Mc Master, C, bo
180 bbls, John W Greene, M McMaster, Colombo
POMADE—4 cs, 225lb, H Warrick, Normandie, Havre
POPPY FLOUR—25 bgs, 3 50lb, A Merkle, Suevia, Hamburg
SEED—30 bgs, 4500lb, J W Phyfe & Co, Leerdam, R'dam
POTASH BICARB—3 cks, 1227lb, Lehn & Fink, Suevia, H'burg
BICHROME—1 cs, 201lb, Lehn & Fink, Suevia, Hamburg
CARB—45 cks, 46235lb, Pickhardt & K, Leerdam, R'd'm
CHLORATE—35 kgs, 3920 lb, E Hills Son & Co, C of Richmond, Liverpool
PRUS—25 cks, 12500lb, C De P Field, S of Indiana, Glasgow
SULPH—10 cks, 3799lb, A Geise, Leerdam, R'dam
POTATO STARCH—335 pgs, 87220lb, F Rose & Co, Thingvalla, Stettin
200 bgs, 41320lb, Maas & W, Suevia, H'burg
QUININE—9 cs, 17700 ozs, J L & D S Riker, Normandie, Havre
5 cs, 12000 ozs, Roessler & H, Suevia, Hamburg
50 cs, 25000 oz, J L & D S Riker, Elbe, Bremen
RHUBARB—51 cs, 6800lb, Stallman & F, Yorkshire, Shanghai
ROSE LEAVES—2 cs, 710lb, J Clay, Leerdam, R'dam
SAFFRON—1 cs, 80lb, Lanman & K, India, Valencia
22 bls, 1500lb, C Oertel, B Yglesias, Vera Cruz
SAGE LEAVES—50 bls, 10947lb, Peek & Velsor, Bothnia, L'pool
25 bls, 6827lb, H Nordlinger & Co, Bothnia, L'l
13 bls, 5280lb, R F Downing & Co, Bothnia, L'pool
SAGO—100 bgs, 22000lb, J P Smith, Moravia, Hamburg
200 bgs, 44000lb, Levy & Levis, Noordland, Antwerp
FLOUR—2363 bgs, 39238lb, Bidwell & French, Henrietta, Singapore
400 bgs, 59956lb, J R Townsend & Co, Henrietta, S'pore
317 bgs, 44648lb, J W Rulon & Son, Henrietta Singapore
SANDALWOOD—13 bls, 2307lb, R Hillier's Son Co, Denmark, London
SARSAPARILLA—32 bls, 9709lb, J W Wilson & Co, C of Atlanta, Tuxpan
4 bls, 703lb, G Amsinck & Co, Hondo, Livingston
24 bls, 6388lb, J W Wilson & Co, C of Atlanta, Vera Cruz
50 bls, 12261lb, Coombs, Crosby & Co, C of Atlanta, Tampico
25 bls, 3550lb, M Echeverria & Co, Hondo, Truxillo
9 bls 1250lb, De Long, Mayer & Co, Hondo, Ruatan
6 bls, 1207lb, Eggers & H, Hondo Cape Gracia
SENNA—19 bls, 4758lb, J Clay, Denmark London
27 bls. Rogers & Pyatt, Bothnia, L'pool
SHELLAC—250 chts, Knudson, P & Co, Denmark, London
100 cs, 16093lb, N Y Shellac Co, Denmark, London
100 cs, Howe & French, W H Lincoln, Calcutta
100 cs in our last on Ludgate Hill came to Rogers & Pyatt
100 cs, L C King & Co, W H Lincoln, Calcutta
SIMARUBA BARK—1 cs, 340lb, Thebaud Bros, El Callao, C B'r
SOAP CASTILE—14 cs, 4535lb, O Haase, Normandie, Havre
500 bxs, 19919lb, Weaver & S, Bothnia, L'pool
STOCK—25 cks, Holbrook Mfg Co, Denmark, London
SODA ASH—454 cks, 559.86lb, Wing & E, Otranto, Newcastle
74 cks, 115112lb, J L & D S Riker, Bothnia, Liverpool
182 cks, 283386lb, Wing & Evans, Egypt, L'pool
149 cks, 27510,lb, J L & D S Riker, Egypt, L'pool
125 cks, 222790lb, Wing & Evans, Obic, L'pool
132 cks, 224244lb, Wing & Evans, C S Whitney, L'pool
85 cks, 112085lb, Wing & Evans, Exeter City, Newcastle
CAUSTIC—600 dms, 389992lb, E Hill's Son & Co, C of Richmond, Liverpool
50 dms, 35163lb R Crooks & & Co, C of Richmond, L'l
279 dms, 177130lb, E Hill's Son & Co, Otranto, N'castle
130 dms, 80.65lb, J Lee & Co, Egypt, L'pool
170 dms, 110804lb, Wing & E, Exeter City, Newcastle
21 dms, 13361lb, J Lee & Co, Adriatic, L'pool
HYPO—304 pgs, 60966lb, J Lee & Co, Exeter City, N'castle
NITRATE—11415 bgs, Crenshaw & W, E T Crowell, Iquique
SAL—528 cks, 2340.0lb, R Crooks & Co, Otranto, Newcastle
SPONGE—31 bls, Lasker & B, Cienfuegos, Nassau
35 bls, A Isaacs & Co, Cienfuegos, Nassau
4 cs, A Isaacs & Co, Suevia, Hamburg
49 bls, C A Salmon & Co, Niagara, Havana
4 bls, J Pappadopola, Santiago, Nassau
5 cs, Lasker & B, Denmark, London
1 bbl, J W E well & Co, Caribbean, Old Providence
STRAMONIUM—21 bls, 10866lb, R F Downing & Co, Bothnia, L'l
SUMAC—125 bgs, 20000lb, Lawrence, G & Co, Venice, Palermo
EXT—1 cs, 55lb, H S Duvran, Bothnia, L'pool
45 kgs, 5613lb, Thurston & B, Bothnia, L'pool
TAPIOCA—920 bgs, 112457 lb, J R Townsend & Co, Henrietta, Singapore
1005 bgs, 115976lb, De Long, M & Co, Henrietta, Singapore
151 bgs, 20080lb, J W Rulon & Son, Henrietta, S'pore
TERRA ALUM—280 pgs, 40 tons, Sanderson & Son, Colorado, Hull
TIN OXIDE—1 cs 91lb, Roessler & H, Suevia, Hamburg
TURMERIC—250 bgs, Howe, Balch & Tay, J E Ridgeway, C'tta
60 bgs, 9'00lb, R Hillier's Son Co, Denmark, L'n
1000 pkts, J E Whitney, W H Lincoln, Calcutta
1000 pkts, J D Lewis, W H Lincoln, Calcutta
ULTRAMARINE—4 cks, 2205 lb, A B Ansbacher & Co, Noordland, Antwerp
5 cs, 2800lb, G W Sheldon & Co, Leerdam, R'm
12 cs, 4795lb, E H Watson, Leerdam, Rotterdam
VANILLA BEANS—1 cs, 93lb, H Martin, C of Richmond, L'poo l
5 cs, 402lb, Dodge & O, Normandie, Havre
VARNISH—62 pgs, 970 gls, Pomeroy & Fischer, Denmark, L'don
1 cs, M Abenheim & Co, Fulda, Bremen
2 cs, C T Raynolds & Co, Normandie, Havre
1 cs, H Leidel, Wyoming, L'pool
VENETIAN RED—500 cks, 165000lb, R J Waddell & Co, Otranto, Newcastle
VERDIGRIS—1 cs, L Windmuller & R, Elbe, Bremen
5 cks, 369lb, A Azema & Co, Republic, L'pool
3 cks, 3115lb, A Klipstein, Republic, L'pool
WHITE LEAD—4 cs, 1988lb, C T Raynolds & Co, Denmark, L'don
10 cks, 5512lb, H Kohnstamm & Co Indie, Trieste
ZINC OXIDE—30 bbls, 6614lb, J Agostina, P de Coninck, A'p
380 bbls, 66134lb, C T Raynolds & Co, P deConinck, A'p
75 cks, 16534lb, H E Williams, Leerdam, R'dam

WAREHOUSED.

ANILINE COLORS—18 cks, 1449lb, Geisenheimer & Co, Elbe Bremen
82 pgs, Pickhardt & K, Leerdam, R'dam
6 pgs, C Geertzl, Noordland, Antwerp
1 cs, 100lb, Lutz & M, Suevia, Hamburg
26 pgs, 5340lb, E Schibach & Co, Noordland, Antwerp
97 pgs, Pickhardt & K, Schiedam, A'dam
CACAO BUTTER—30 cs, 6720lb, Jungbluth & W, Greece, L'don
CEMENT—1500 cks, H Fleming, Greece, London
CORKS—25 bls, F Llado & Co, Anchoria, Glasgow
DEXTRINE—200 bgs, 44096lb, Jungbluth & W, Marsala, H'g
100 bgs, 22046lb, Jungbluth & W, Polaria, Hamburg
GLUE—80 cs, 11508lb, S M Marks, Normandie, Havre
GLYCERINE CRUDE—10 dms, 10847 lb, J E Schweizer & Co, Schiedam, Rotterdam
HEMPSEED—250 bgs, 42672lb, C Von Pustau, Buffalo, Hull
LICORICE PASTE—30 cs, 6500lb, Zaricaiday & A, Bolivia, Naples
MATCHES—50 cs, S M Marks, Colorado, Hull
OIL CODLIVER—50 bbls, 1250 gls, Lanman & Kemp, Colorado, H'l
OPIUM—11 cs, 2000lb, G Amsinck & Co, Denmark, London
10 cs, 1806lb, W H Schieffelin & Co, Greece, London
POMADE—38 cs, L Bernard & Co, Normandie, Havre
6 cs, "Cuarras," Moravia, Havre
POTATO FLOUR—700 bgs, 152779lb, F Rose & Co, Thingvalla, L'n
STARCH—100 bgs, 21600lb, F Rose & Co, Tsingvala, S'n
RED LEAD—50 kgs, 5600lb C T Raynolds & Co, Otranto, N'tle
SALTPETER—1000 bgs, 223157lb, E I Dupont, De N Co, T E Starbuck, Calcutta
SODA BICARB—500 cks, 560 0lb, E Hill's Son & Co, Otranto, N'c'e
BICHROME—143 cks, 98557lb, J L & D S Riker, S of Nev, Glasgow
CAUSTIC—250 dms, 158807lb, E Hill's Son & Co, Otranto, N'c'e
SPONGE—15 cs, Lasker & B, Denmark, London
VANILLINE—4 cs, 400 ozs, L Bernard & Co, Normandie, H'e

IMPORTS AT BALTIMORE.

ANTIMONY—25 cks, Toledo, London
CEMENT—500 bbls, Mareca, Antwerp
GLASS—23 cs, Mareca, Antwerp
PEPPER—50 bgs, Toledo, Swansea
SODA ASH—923 cks, Nova Scotian, Liverpool
68 cks, 112084lb, Wing & Evans, Oranmore, Liverpool

IMPORTS AT MONTREAL.

Week ending January 14, 1888
AMMONIA—20 kgs, order, Colins, Glasgow
CHINA CLAY—1 bg, C Cunningham, Sarnia, L'pool
CHEMICALS—31 bbls, Frothingham & W, Sarnia, L'pool
DRUGS—3 cs, K Campbell & Co, Sarnia, L'pool
SODA ASH—36 cks, order, Sarnia, L'pool

IMPORTS AT NEW ORLEANS

ARGOLS—63 cks, Paris, Bordeaux
CLOVES—20 bls, Professor, Liverpool
CHILLIES—20 bls, Professor, Liverpool
CINNAMON—28 bls, Professor, Liverpool
GLASS WINDOW—1236 bxs, Paris, Antwerp
OIL ESSENTIAL—5 cs, Effective, Messina
OLIVE 9 cks, Effective, Messina

ENGLISH CUDBEAR
Casks. Barrels. Kegs.
W. A. ROSS & BRO.
56 PINE ST., NEW YORK.

ARBONATE OF AMMONIA.
Chlorate of Potash.
Oxalic Acid.
Zinc Dust. (Indigo Auxiliary.)
Blood and Egg ALBUMEN.
ANILINE COLORS.

Schulze-Berge & Koechl,
75 PINE STREET, NEW YORK.
IMPORTERS OF CHEMICALS AND DYESTUFFS,
AND SOLE AGENTS FOR
Salol, pat'd, the new Antiseptic.
Made under License of the Patentees of Dr. F. v. Heyden, nachf. Radebeul

MIRBANE OIL.
Pure Aniline Oil & Salt
SALICYLIC ACID.
Archil Extract.
Indigo Extract.
ALIZARINE.

ABRAM De RONDE & CO.
Dyewood Extracts, Archil, Indigo, Sumac, Bark, Chestnut, Hemlock.
Cudbear, Sumac American, Sumac Sicily, Gambier, Cutch, Divi Divi, Nut Galls.
Importers and Manufacturers
Chemicals AND Dyestuffs.
12 Cedar Street, New York.
Tin Crystals, Stannate Soda, Muriate Tin, Oxy Mur. Tin, Oxy Mur. Antimony, Antimony Salts, Nitrate Copper.
Nitrate Iron, Iron Liquor, Prussiate Potash. Red " " Yel. Oxalic Acid, Glauber Salt, Fullers Earth

PIMENTO—6 bgs, Wanderer, Livingston
SODA CAUSTIC—250 dms, Professor, Liverpool
SAL—200 bbls, Professor, Liverpool
VENETIAN RED—:60 bbls, Professor, Liverpool

IMPORTS AT PHILADELPHIA.

AMMONIA MURI—6 cks, Springfield, Newport, Eng
ASPHALT—750 tons, Barber Asphalt Co, Chattanooga, Pt Spain
BRIMSTONE—1000 tons, Cooper Smith & Co, Orsino, Palermo
CANARY SEED—50 bgs, Orsino, Palermo
LICORICE—10 pgs, French, Richards & Co, Lord Clive, L'pool
LOGWOOD—423 tons, J M Sharpless & Co, E S Newman, M River
SOAP CASTILE—500 bxs, Eisner & M Co, A Accame, Leghorn
SODA ASH—556 cks, 299108lb, Wing & E, Br Princess, L'pool
57 cks, 112689lb, J Lee & Co, Lero, Newcas'le
SUMAC—4785 bgs, Orsina, Palermo

IMPORTS AT BOSTON.

ACID BENZOIC—1 cs, Cutler Bros & Co, S City, London
ANTIMONY—20 cks, Phelps, Dodge & Co, S City, London
ARCHIL—10 cks, Howe, Balch & Tay, S City, London
BALSAM—4 cs, A Lansmann, Santiago, Hull
BLEACH—165 cks, Morey & Co, Istrian, L'pool
83 cks, Linder & Meyer, Istrian, L'pool
337 cks, order, Istrian, L'pool
CARDAMOMS—5 cs, West & Jenney, S City, London
2 cs, Cutler Bros & Co, S City, London
CHLORODYNE—1 cs, Cutler Bros & Co, S City, London
CHINA CLAY—650 cks, order, Istrian, L'pool
CUTCH—161 bxs, order, Istrian, L'pool
COLORS—21 cks, T Leyland & Co, Istrian, L'pool
DEXTRINE—400 bgs, Stockholm City, London
DYEWOOD EXT—100 cks, Beach & Co, Norseman, L'pool
25 cks, Istrian, L'pool
EMERY—120 kgs, D W King & Co, S City, London
FUSTIC—5000 lbs, W F Green & Son, Water Witch, Pt au Prince
GALLS—46 bgs, J D Lewis, S City, London
GLASS—114 pgs, R Sherburne & Co, Istrian, L'pool
PLATE—1 cs, R Sherburne & Co, Istrian, L'pool
6 cs, Hills, Turner & Co, Istrian, L'pool
WINDOW—300 bxs, S Bache & Co, Istrian, L'pool
GUM COPAL—15 pgs, N B Mansfield, Elmiranda, Elmina
SUB—4 cks, T Leyland & Co, Istrian, L'pool
TRAG—12 cs, West & Jenney, S City, London
ISINGLASS—46 pgs, S City, London
LOGWOOD—393400lb, M E Mosely, Gonaives
440050lb, Lyon, Dupuy & Co, Dione, Gonaives
240000lb, Lyon & Co, Alert, Hayti
385655lb, Lyon, Dupuy & Co, Alert, Hayti
130000lb, Thackray & Co, Alert, Hayti
70000lb, Dupuy, Raboul & Co, Alert, Hayti
445000lb, W F Green & Son, Water Witch, Pt au Prince
502000lb, order, M Buck, Mirigoane
MEDICAL LEAVES—1 cs, Cutler Bros & Co, S City, London
OCHER—10 cks, Stone & Downer, Santiago, Hul
OIL COD—12 cks, Stratton, Little & Co, L Wharton, St John's
CODLIVER—5 bbls, Cutler Bros & Co, Santiago, Hull
OLIVE—50 bbls, Santiago, Hull
PALM—535 pgs, N B Mansfield, Elmiranda, Elmina
SANDAL—1 cs, Cutler Bros & Co, S City, London
PARAFFINE WAX—50 cs, Stockholm City, London
RHUBARB 6 c, Cutler Bros & Co, S City, London
SEDATIVE—1 cs, Cutler Bros & Co, S City, London
SOAP CASTILE—500 bxs, Norseman, Liverpool
SODA ASH—60 cks, Istrian, Liverpool
60 cks, Morey & Co, Istrian, Liverpool
117 cks, 30945lb, Wing & Evans, Istrian, Liverpool
CAUSTIC—200 dms, E & F King & Co, Norseman, L pool
100 dms, order, Norseman, Liverpool
250 dms, order, Istrian, Liverpool
VARNISH—6 cs, C Richardson & Co, S City, London
VENETIAN RED—165 cks, Stone & Downer, Istrian, Liverpool
ZINC OXIDE—100 bbls, E & F King & Co, S City, London

WITHDRAWALS FROM BOND.

Week ending Jan. 14, 1888

Acid boracic, cks	20
Acsd citric, kgs	5
Aniline colors, pgs	125
Bay rum, pgs	16
Bronze powder, cs	4
Corks, bls	27
Cacao butter, cs	11
Cement, cks	100
Glass window, cs	997
Glycerine crude, dms	3
Glycerine ref, dms	6
Guarana, cs	7
Hempseed, bgs	250
Licorice paste, cs	90
Oil olive, cks	2
Opium, cs	6
Paint, cs	36
Perfume, cs	1
Pomade, pgs	39
Potash chlo, cs	10
Potash hydrate, bbls	14
Size, cks	8
Soap castile, bxs	900
Sponge, bls	58
Sponge, cs	63
Soda bicarb, kgs	10
Soda caustic, dms	191
Tar, cks	2
Varnish, cs	34

TOTAL DOMESTIC RECEIPTS

FOR WEEK ENDING JAN. 16, 1888.

		For week.	Since Jan 1.
Alcohol	bbls.	1043	1778
Ashes	pkgs.	40	137
Beeswax	pkgs.	7	26
Borax	cks.	..	....
	bbls.	..	....
China clay	cks	126	282
Cottonseed	bags	..	....
Meal	bgs.	300	300
Cake	bgs.	..	52
Soap Stock	bbls.	..	....
Flaxseed	bush.	1100	1100
Grease	pkgs	600	976
High Wines	bbls.	1345	3130
Lead	pigs	8687	19932
Mustard seed	bgs.	612	612
Oil, Cottonseed	bbls.	3084	7039
Lard	bbls.	60	240
Linseed	bbls.	..	....
Lubricating	bbls	85	335
Cake	bags	5018	12329
Oleo stock	pkgs.	400	1250
Pitch	bbls.	132	172
Quicksilver	flks.	850	976
Rosin	bbls.	7961	12706
Stearine	pkgs.	143	450
Sumac	bags	70	224
Tallow	pgs.	1572	2526
Tar	bbls.	924	1793
Turpentine, crude	bbls	65	125
Spirits	bbls	783	2784

NEW YORK DOMESTIC RECEIPTS

ALCOHOL—820 bbls, J A Webb, Penn RR
75 bbls, D T Mills, Penn RR
80 bbls, Boyd & Co, Penn RR
68 bbls, H & H Reiners, Penn RR
ASHES—19 pgs, Balt Inland
3 pgs, order, Erie RR
18 pgs, order, H R RR
BALSAM FIR—2 bbls, S G McCotter & Co, str San Francisco
BEESWAX—2 pgs, Thurber, W & Co, str, C'ton
2 pgs, order, Erie RR
3 pgs, order, str, Richmond
BORAX—512 sks, E C Calum, str, S F
517 sks, Chem Imp Co, str, S F
CASCARA SAGRADA—1053 sks, McKesson & Robbins, str, S F
CLAY—126 cks, R McNamee & Co, str, Charle'n
COTTONSEED MEAL—300 bgs, Hollister, C & Co, str, Richmond
DAMIANA—13 bls, McKesson & R, str, S F
FLAXSEED—1100 bush, Campbell & T, D, L & W RR
FUSTIC—8720 pgs, order, str, N O
GREASE—235 bbls, order, N R boats
42 tcs, J Taylor, Penn RR
49 bbls, order, Penn RR
60 bbls, Fayerweather & L, str, Richmond
35 pgs, A W Morris, Balt Inland
100 pgs, J Sinclair & Co, Erie RR
83 pgs, order, H R RR
17 pgs, order, D, L & W RR
69 pgs, G Vandenhove, N Y, W S & B RR
GLUE—25 bbls, W H Codington, str, S F
HERBS—6 bls, Peek & V, str, S F
HIGH WINES—295 bbls, G W Kidd & Co, Penn RR
375 bbls, J A Webb, Penn RR
70 bbls, J L Hasbrouck, D, L & W RR
65 bbls, Rose & K, Penn RR
325 bbls, J Griffith & Co, Penn RR
150 bbls, Cook & B, Penn RR
65 bbls, T B Kerr, Penn RR
LEAD—733 pigs, Tatham Bros, Penn RR
881 pigs, Naylor & Co, Penn RR
916 pigs, order, Penn RR
800 pigs, N Corwith & Co, str, Richmond
36 pigs, order, Erie RR
4489 pigs, order, H R RR
633 pigs, Behr & S, Penn RR
MUSTARD SEED—612 sks, H W Hemingway & Sons, str, S F
OIL COTTONSEED—200 bbls, Am Oil Co, str, Galveston
900 bbls, So Oil Co, str, Richmond
500 bbls, Hopkins, D & Co, Penn RR
15 bbls, order, N R boats
300 bbls, So Oil Co, str, Savannah
50 bbls, Am Oil Co, str, Savannah
100 bbls, F G Brown, str, Richmond
70 bbls, Simmonds & G, str, Fernandina
249 bbls, Am Oil Co, str, Brunswick
300 bbls, So Oil Co, str, N O
100 bbls, Hopkins, D & Co, str, Savannah
100 bbls, So Oil Co, str, Charleston
200 bbls, Ky Mfg Co, str, Richmond
LARD—60 bbls, Fairbank & Co, H R RR
LUB—75 bbls, Vacuum Oil Co, Erie RR
10 bbls, order, C RR of N J
CAKE—111 bgs, order, Erie RR
100 bgs, J W Nightingale, Erie RR
300 bgs, I & C Moore & Co, Erie RR
865 bgs, I & C Moore & Co, H R RR
1369 bgs, I & C Moore & Co, Penn RR
100 bgs, Simmonds & G, L V RR
1576 bgs, Simmonds & G, H R RR
400 bgs, Simmonds & G, D, L & W RR
107 bgs, D T Wade, L V RR
OLEO STOCK—400 pgs, H O Armour, H R RR
PITCH—82 bbls, N H Hayman, str, Richmond
25 bbls, forward, str, Wilmington
25 bbls, R F Seaman, str, Wilmington
QUICKSILVER—600 flks, Taft, H & Co, str, S F
250 bbls, Haas Bros, str, S F
ROSIN—29 bbls, Z Mills, str, Charleston
325 bbls, W M Larendon, str, Charleston
125 bbls, G Potter & Co, str, Charleston
131 bbls, W H Wiggins, str, Charleston
700 bbls, Dutton & W, str, Savannah
518 bbls, F W Blossom, str, Savannah
960 bbls, Murchison & Co, str, Savannah
658 bbls, M W Larendon, str, Savannah
100 bbls, G W Bailey & Co, str, Wilmington
105 bbls, Paterson D Co, str, Richmond
85 bbls, Tolar H & Co, str, Richmond
368 bbls, G W Bailey & Co, str, Richmond
430 bbls, M W Larendon, str, Brunswick
64 bbls, G Potter & Co, str, Brunswick
127 bbls, G W Bailey & Co, str, Savannah
104 bbls, J Turtons Sons, str, Savannah
86 bbls, forward, str, Savannah
583 bbls, W H Wiggins, sch, Georgetown
1567 bbls, Tolar H & Co, sch, Georgetown
227 bbls, Z Mills, sch, Georgetown
292 bbls, G Potter & Co, sch Georgetown
240 bbls, forward, str, Richmond
36 bbls, G W Bailey & Co, str, Charleston
41 bbls, Murchison & Co, str, Richmond
60 bbls, order, str, Richmond
STARCH—1700 pgs, order, Penn RR
3090 pgs, order, H R RR
STEARINE—6 pgs, order, Penn RR
75 pgs, H O Armour, Erie RR
62 pgs, B V Paige, B & O RR
SUMAC—70 bgs, Rose, McA & Co, str, R'mond
TALLOW—161 bbls, H W Calef, N R boats
103 bbls, G Vandenhove, N R boats
10 bbls, A Churchman, N R boats
35 bbls, H O Armour, H R RR
18 pgs, order, Penn RR
116 pgs, G B Ferris & Co, Penn RR
56 pgs, order, C RR of N J
35 pgs, Colgate & Co, D, L & W RR
5 pgs, order, N Y, W S & B RR
33 pgs, order, N R boats
15 pgs, E S Kuh, Erie RR
32 pgs, order, H R RR
41 pgs, order, D, L & W RR
58 pgs, H W Calef, C RR of N J
82 pgs, H W Calef, str, Richmond
32 pgs, H W Calef, Penn RR
26 pgs, G Vandenhove, C RR of N J
14 pgs, H W Calef, L V RR
101 pgs, G Vandenhove, L V RR
42 pgs, Welch, H & C, L V RR
10 pgs, order, L V RR
9 pgs, order, Erie RR
31 pgs, Van Iverstine & Co, C RR of N J
25 pgs, E S Kuh, N Y, W S & B RR
6 pgs, Colgate & Co, str, Richmond
93 pgs, Welch, H & C, N R boats
25 pgs, Welch, H & C, Penn RR
12 pgs, G B Ferris & Co, D, L & W RR
112 pgs, order, str, Richmond
29 pgs, G Vandenhove, H R RR
9 pgs, E S Kuh & T, H R RR
70 pgs, G Winter, Penn RR
126 pgs, G H Williams, Penn RR
TAR—32 bbls, Z Mills, str, Richmond
25 bbls, A F Seaman, str, Wilmington
328 bbls, forward, str, Wilmington
412 bbls, order, str, Wilmington
94 bbls, G W Bailey & Co, str, Richmond
33 bbls, G Potter & Co, sch, Georgetown
TURPENTINE SP—102 bbls, F W Blossom, str, Charleston
94 bbls, Tolar, H & Co, str, Wilmington
32 bbls, Fenner & Co, str, Wilmington
50 bbls, forward, str, Wilmington
397 bbls, order, str, Wilmington
113 bbls, Tolar, H & Co, str, Richmond
44 bbls, G W Bailey & Co, str, Richmond
50 bbls, G Potter & Co, str, Brunswick
112 bbls, W H Wiggins, sch, Georgetown
238 bbls, Tolar, H & Co, sch, Georgetown
281 bbls, G Potter & Co, sch, Georgetown
35 bbls, W R Winn, sch, Georgetown
13 bbls, Z Mills, sch, Georgetown
50 bbls, Paterson, D & Co, str, Wilmington
10 bbls, order, str, Savannah
154 bbls, M W Larendon, str, Charleston
4 bbls, G W Bailey & Co, str, Charleston
4 bbls, Murchison & Co, str, Richmond
CRUDE—65 bbls, order, str, Wilmington

NEW ORLEANS DOMESTIC RECEIPTS.

CANDLES—10 bbls, N O & N E RR
COTTONSEED—1342 sks, S P RR
7 cars, S P RR
512 sks, Monroe
3205 sks Shreveport
22 cars, L, N O & T RR
12 cars, 586 sks, T & P RR
3121 sks, Washington
2039 sks, Bayou Sara
4260 sks, Grand Lake
21648 sks, Greenville
100 sks, Amite River
4877 sks, Cane River
2488 sks, Delhi
5142 sks, Vicksburg
HULLS—3 cars, L, N O & T RR
MEAL—400 sks, Ill C RR
3500 sks, 3 cars, L, N O & T RR
3985 sks, T & P RR
4 cars, N O & N E RR
FERTILIZERS—2 cars, L & N RR
GLASS WINDOW—1 car, L & N RR
GLUCOSE—200 bbls, L, N O & T RR
GLUE—100 bbls, S P RR
GUANO—1055 tons, Falmouth
HOPS—10 bls, N O & N E RR
121 bls, S P RR
LIME—2 cars, N O & N E RR
3 cars, L & N RR
NAPHTHA—1 car, L, N O & T RR
OIL—1114 bbls, S P RR
9 cars, N O & N E RR
350 bbls, T & P RR
424 bbls, L, N O & T RR
193 bbls, Grand Lake
2 cars, L & N RR
224 bbls, Vicksburg
CAKE—60 sks, 3cars, S P RR
4121 sks, L, N O & T RR
1 car, L & N RR
450 sks, T & P RR
260 sks, Ill C RR
ROSIN—15 cars, N O & N E RR
1020 bbls, Mobile
58 bbls, Pascagoula
SOAP—521 bxs, Ill C RR
750 bxs, L, N O & T RR
STARCH—4775 bxs, 150 bbls, Cincinnati
1 car, N O & N E RR
TALLOW—58 bbls, S P RR
1 bbl, T & P RR
TURPENTINE—48 bbls, Mobile
175 bbls, Pascagoula
WHITE LEAD—1 car, L, N O & T RR

WILMINGTON DOMESTIC RECEIPTS

ROSIN—6186 bbls, inland
TAR—817 bbls, inland
TURPENTINE—1145 cks, inland
CRUDE—467 bbls, inland

CHARLESTON DOMESTIC RECEIPTS

CLAY—120 bbls, S C RR
FERTILIZERS—4 cars, N E RR
OIL—5 cars, N E RR
ROSIN—817 bbls, N E RR
67 bbls, C & S RR
1890 bbls, S C RR
TAR—1 car, N E RR
TURPENTINE SPIRITS—67 bbls, N E RR
93 bbls, S C RR
1 tank, S C RR

BOSTON DOMESTIC RECEIPTS

COTTONSEED—574 bgs, str, Savannah
MEAL—44360 bush, 875 bgs, by sea
GREASE—30 tcs, 183 bbls, B & A RR
8 bbls, B & P RR
1 bbl, Old Colony RR
3 hhds, 10 bbls, B & M RR
3 cks, 3 hhds, 26 bbls, by sea
36 bbls, N Y & N E RR
6 bbls, Fitchburg RR
ROSIN—149 bbls, str, Savannah
TALLOW—70 tcs, 21 bbls, B & A RR
6 bbls, 6 hhds, B & P RR
1 pg, 19 bbls, Old Colony RR
87 bbls, 25 hhds, 5 cks, 9 pgs, B & M RR
19 bbls, 2 hhds, 1 tc, by sea
12 bbls, N Y & N E RR
4 pgs, Fitchburg RR
TURPENTINE SPIRITS—179 bbls; str, Sav

EXPORTS FROM NEW YORK FOR THE PAST WEEK.

ACID
2 cbys $8 Phoebe, Mayaguez
2 pgs $29 Colon, Aspinwall

ACID ACETIC
1 cby $7 C of Alexandria, Campeachc

ACID STEARIC
2 bbls $57 C of Alexandria, Campeache

ACID SULPHURIC
5 cbys $22 Orinoco, Hamilton
1 cby $4 Muriel, Domencia
24 cbys $65 San Marcos, Havana

ALCOHOL
50 gls $33 Alvena, Hayti
137 gls $76 Muriel, Barbadoes

ALCOHOL WOOD
4152 gls $3121 Buffalo, London

ALOES
30 cs $178 Buffalo, London

ANISEED
2 pgs $50 Alvena, Hayti

ASPHALTUM
19356 lbs $300 Polaria, Hamburg
20 bbls $500 Moravia, Hamburg

BONES
365 bgs $1000 Bosphorus, London
44 bgs $1240 Normandie, Havre

BARK EXTRACT
3250 lbs $150 Bolivia, Genoa

BRIMSTONE
20 bbls $112 Phoebe, Mayaguez
15 bbls $43 Trinidad, Hamilton

CACAO BUTTER
4 cs $324 Buffalo, London

CAMPEACHE EXTRACT
6032 lbs $440 Patmos, Montevideo

CAMPHOR CRUDE
134 pgs, $4000 Buffalo, London

CANDLES
100 bxs $82 J T Matheson, Roseau
10 bxs $18 Alvo, Kingston
105 bxs $127 Alvo, Savanilla
27 cs $270 Alvena, Hayti
2 bxs $20 W A McKay, Jacmel
150 bxs $216 Teloo, Ponce
40 bxs $68 Kaluna, St Kitts
58 bxs $325 Colon, Aspinwall
5 bxs $11 Trinidad, Hamilton
8 bxs $96 C of Alexandria, Campeache
75 bxs $330 Portuense, Para
1 bx $15 Muriel, St Pierre
46 bxs $159 Muriel, Antigua
85 bxs $168 Muriel, Trinidad
10 bxs $68 Patmos, Montevideo
3 bxs $30 Alert, Hayti
108 bxs $177 Americus, La Guayra
165 bxs $232 Odin, C Bolivar
5 bxs $95 Savona, Rio Janeiro
5 bxs $10 Philadelphia, Curacoa
55 bxs $145 Philadelphia, La Guayra

CARBON
225 bbls $1150 France, London
50 bbls $315 Leerdam, Rotterdam
11 bbls $66 Polaria, Hamburg

CASSIA
10 bls $33 H M Rowley, St Johns P R
17 bls $58 Americus, La Guayra
21 bls $70 Philadelphia, La Guayra

CEMENT
10 bbls $20 Buffalo, London
15 bbls $40 Alvena, Hayti
10 bbls $12 W C Green, Hamilton
27 bbls $65 L G French, Baranquilla
5 bbls $19 Philadelphia, La Guayra

CHALK
5 bbls $5 Welhaven, San Juan
6 bbls $8 Santiago, Cienfuegos

CLAY
150 bgs $130 State of Nevada, Glasgow

COAL TAR DYE
40 cs $600 S of Nevada, L'pool

COLORS
10 cs $75 Philadelphia, La Guayra

COTTONSEED
747 bgs $860 Bosphorus, London

COTTONSEED STEARINE
94882 lbs $65.0 Leerdam, Rotterdam

CUMMIN SEED
4 pgs $108 C of Alexandria, Progreso

DYESTUFF
3 cs $112 Baltic, L'pool

DYEWOOD EXTRACT
11200 lbs $616 Ethiopia, Glasgow
12000 lbs $935 Waesland, Antwerp

FERTILIZER
261 pgs $923 Trinidad, Hamilton
12 bbls $55 Strathleven, Shanghai

FLORIDA WATER
20 doz $54 Alvo, Kingston
18 doz $42 Alvo, Savanilla
12 doz $29 San Marcos, Havana
12 doz $24 C of Columbia, Tampico
78 doz $236 Colon, Aspinwall
6 doz $20 Portuense, Para
37 pgs $203 Patmos, Montevideo
12 doz $70 Odin, C Bolivar
63 doz $190 Philadelphia, La Guayra

GASOLENE
250 gls $85 J C Noyes, Pt Natal
203 gls $39 Portia, Halifax

GLUE
5 cks $250 Rhein, Bremen
1 bbl $36 B Yglesias, Progreso

GREASE
20000 lbs $700 Jan Breydel, Antwerp
4000 lbs $200 Normandie, Havre
29000 lbs $750 Rosse, L'pool
20000 lbs $700 J Breydel, Antwerp
24330 lbs $1184 C of Alexandria, Progreso
9154 lbs $438 Niagara, Havana

GRAPE SUGAR
60480 lbs $1360 Buffalo, London

GUM KAURI
11000 lbs $385 France, London

KALSOMINE
5 pgs $50 Trinidad, Hamilton

LAMPBLACK
7 bbls $14 Welhaven, San Juan

LIME ACETATE
26317 lbs $658 Rhein, Bremen
74717 lbs $1633 J Breydel, Antwerp
63384 lbs $1140 Buffalo, London
74717 lbs $1633 J Breydel, Antwerp
111585 lbs $1900 Lake Ontario, L'pool

LOGWOOD EXTRACT
100 lbs $8 Philadelphia, La Guayra

LUBRICATING GREASE
36 pgs $63 Alvo, Kingston
2078 lbs $93 Alvo, Savanilla
1082 lbs $27 San Marcos, Havana
916 lbs $78 Portia, Halifax
2160 lbs $178 Santiago, St Jago
175 cs $925 Patmos, Montevideo
2460 lbs $60 S of Nevada, Glasgow

MATCHES
14 cs $231 Alvo, Savanilla
13 cs $175 Alvena, Hayti
25 cs $260 L G French, Baranquilla
40 cs $190 Kaluna, St Kitts
5 cs $95 Muriel, Trinidad
1 cs $5 Muriel, Antigua
1 cs $10 Colon, Aspinwall
20 cs $140 Patmos, Montevideo
2 cs $7 M Standish, San Andreas

OIL ALMOND
1 cs $26 Alvo, Tabanilla
1 cs $13 Colon, Aspinwall
1 cs $8 Odin, C Bolivar
12 cs $137 Philadelphia, La Guayra

OIL CAKE
667593 lbs $8842 Buffalo, London
283520 lbs $3500 Waesland, Antwerp
93000 lbs $1080 Ethiopia, Glasgow
113007 lbs $1356 Durham City, Newcastle
157386 lbs $2295 Bosphorus, London
995911 lbs $14949 Quebec, Avonmouth
360000 lbs $5400 Spain, L'pool
31340 lbs $320 Montauk, Leith
739713 lbs $5796 Marengo, Hull

OIL CASTOR
40 gls $24 Flamborough, Cape Hayti

OIL CODLIVER
31 cs $663 Waesland, Antwerp
6 pgs $270 C of Columbia, Tampico
420 cs $3990 Bosphorus, London
12 cs $252 Colon, Aspinwall
13 pgs $428 C of Alexandria, Vera Cruz
18 pgs $618 Patmos, Montevideo
4 cs $21 Muriel, Trinidad
4 cs $18 Flamborough, Cape Hayti

OIL COTTONSEED
180 gls $99 Savona, Rio Janeiro
12 0 gls $500 Ethiopia, Glasgow
18000 gls $10000 Schiedam, Amsterdam
750 gls $389 Alvo, Kingston
2493 gls $13.0 Leerdam, Rotterdam
80 gls $45 Portuense, Pernambuco
4700 gls $1900 Bolivia, Genoa
50 gls $28 Muriel, Trinidad
201 gls $116 Americus, La Guayra
40 gls $21 Odin, C Bolivar

OIL CURRYING
25042 gls $7026 Buffalo, London

OIL ESSENTIAL
13 cs $1869 La Bretagne, Havre
67 cs $1533 Mosser, London
25 cs $1508 Moravia, Hamburg

OIL HARNESS
1 cs $19 Alvo, Kingston
1 cs $19 Portia, Halifax
27 pgs $95 Spain, L'pool

OIL LARD
120 gls $86 J R Talbot, Arroyo
500 gls $375 Culdoon, East London
68 gls $50 Alvo, Kingston
650 gls $453 J C Noyes, Pt Natal
1402 gls $1025 Moravia, Hamburg
52 gls $23 C of Alexandria, Vera Cruz
975 gls $526 Colon, Aspinwall
95 gls $64 Muriel, Trinidad
161 gls $117 Phila, Curacoa

OIL LINSEED
50 gls $32 J R Talbot, Arroyo
96 gls $63 Alvena, Hayti
34 gls $24 L G French, Baranquilla
68 gls $30 Colon, Aspinwall
50 gls $31 C of Alexandria, Campeache
316 gls $168 Portuense, Para
363 gls $226 Colon, Colon
47 gls $31 Muriel, Trinidad
60 gls $38 Odin, C Bolivar

OIL LUBRICATING
650 gls $175 S of Nevada, Glasgow
21756 gls $3250 Italy, Liverpool
150 gls $165 Ardenrigh, Matanzas
450 gls $169 Culdoon, East London
4750 gls $800 Rhein, Bremen
41000 gls $6750 La Bretagne, Havre
60966 gls $9125 Buffalo, London
5114 gls $1505 Schiedam, Amsterdam
39690 gls $5761 Waesland, Antwerp
750 gls $190 Ethiopia, Glasgow
76 gls $39 Alvo, Savanilla
3770 gls $565 Durham City, Newcastle
640 gls $225 Mabel, Callao
48 gls $24 C of Columbia, Vera Cruz
3000 gls $750 E Monarch, London
2500 gls $200 Normandie, Havre
6499 gls $555 Polaria, Hamburg
4000 gls $1000 Noordland, Antwerp
7357 gls $686 L Hill, London
10000 gls $700 Marengo, Hull
21350 gls $5780 Spain, Liverpool
9950 gls $1600 Montauk, Leith
500 gls $107 Muriel, St Kitts
249 gls $58 Portuense, Para
9969 gls $1667 Bolivia, Naples
1495 gls $300 Strathleven, Hong Kong
500 gls $300 Strathleven, Shanghai
100 gls $32 Odin, Cd Bolivar
600 gls $150 Bristol City, Bristol
5595 gls $2800 Savona, Rio Janeiro
80211 gls $12134 Lake Ontario, Liverpool

OIL MACHINE
1 cs $10 Alvo, Pt Limon
2 cs $15 Colon, Aspinwall
6 cs $43 C of Alexandria, Vera Cruz

OIL MEAL
56000 lbs $2240 Jan Breydel, Antwerp
41625 lbs $935 Atlantic, Bridgetown
31250 lbs $500 Rising Sun, Bridgetown
12500 lbs $200 Daylight, Pt Spain
56000 lbs $1240 Jan Breydel, Antwerp
7500 lbs $115 Muriel, Antigua
2800 lbs $45 Muriel, St Kitts
5750 lbs $107 Muriel, Trinidad

OIL NEATSFOOT
3221 gls $2195 Normandie, Havre
251 gls $138 Noordland, Antwerp
995 gls $440 Spain, Liverpool

OIL OLEO
649920 lbs $48566 Schiedam, Amsterdam
42361 lbs $5000 Moravia, Hamburg

OIL OLIVE
40 gls $40 Odin, C Bolivar

OIL PALM
2236 lbs $129 Alvo, Pt Limon
1267 lbs $79 Portuense, Para
2 bbls $40 Colon, Aspinwall
415 lbs $24 Philadelphia, LaGuayra

OPIUM
2 cs $1025 San Marcos, Havana
1261 lbs $4728 Bosphorus, London
1502 lbs $6534 C of Alexandria, Havana

PAINT
2 cs $ 8 J R Talbot, Arroyo
5 bbls $38 Elbe, Bremen
11 bbls $425 Waesland, Antwerp
6 pgs $73 Alvo, Kingston
27 pgs $373 Alvo, Savanilla
1 pg $10 Alvo, Pt Limon
68 pgs, $142 Alvena, Hayti
1 cs $7 L G French, Baranquilla
1 bx $24 Phoebe, Mayaguez
8 pgs $170 City of Columbia, Vera Cruz
8 bbls $275 San Marcos, Havana
1 cs $12 Welhaven, San Juan
23 cs $235 Portia, St John's, N F
15 cs $315 Normandie, Havre
29 pgs $350 Philadelphia, Maracaibo
10 bbls $230 Hans & Kurt, Hamburg
22 cs $124 Colon, Aspinwall
1 bbl $35 C of Alexandria, Progreso
1 bbl $38 Muriel, St Lucia
20 kgs $44 Alert, Hayti
67 pgs $.91 Patmos, Montevideo
2 bbls $o B Yglesias, Progreso
7 pgs $44 Odin, Cd Bolivar
68 pgs $211 Philadelphia, La Guayra
20 pgs $250 Republic, Liverpool

PATENT DRYER
5 bbls $77 Leerdam, Rotterdam

PARAFFINE WAX
33469 lbs $1125 Italy, Liverpool
408750 lbs $3800 Buffalo, London
362510 lbs $8069 Mosser, London
40900 lbs $2400 Ethiopia, Glasgow
124482 lbs $5413 France, London
11983 lbs $450 Colorado, Hull
73605 lbs $3000 Montauk, Leith

PEPPER
15 bgs $315 Alvena, Hayti
5 bgs $105 Phoebe, Mayaguez
6 bgs $120 W A McKay, Jacmel
10 bgs $190 Telos, Aquadilla
6 bgs $124 C of Alexandria, Progreso
35 bgs $838 Portuense, Para
5 bgs $90 Americus, La Guayra
20 bgs $115 B Yglesias, Progreso
6 bgs $51 Odin, Cd Bolivar
9 bgs $153 Philadelphia, La Guayra

PHOSPHATE
20 tons $224 Strathleven, Yokohama

PIMENTO
7 bgs $97 Philadelphia, La Guayra

PITCH
7 bbls $16 Alvena, Hayti
3 bbls $7 L G French, Baranquilla
20 bbls $29 Rising Sun, Bridgetown
25 bbls $35 Strathleven, Hong Kong

POTASH
10 cs $360 Welhaven, San Juan

POTASH CHLO
25 kgs $353 H W Rowley, St Johns, P R

QUICKSILVER
10 flks $501 Colon, Aspinwall

QUININE
300 ozs $116 Philadelphia, Curacoa

ROOTS
37 pgs $425 Trinidad, Hamilton

ROSIN
25 bbls $60 Alvo, Pt Limon
1 bbl $3 Alvena, Hayti
350 bbls $659 L G French, Baranquilla
498 bbls $1452 Mabel, Callao
5 bbls $15 Welhaven, San Juan
704 bbls $930 Bosphorus, London
200 bbls $510 Critic, Leith
550 bbls $598 Portuense, Brazil
1 bbl $4 Muriel, Trinidad
318 bbls $669 Americus, La Guayra
25 bbls $85 Odin, C Bolivar
589 bbls $850 Lake Ontario, Liverpool
344 bbls $854 Philadelphia, La Guayra
284 bbls $800 S of Nevada, Glasgow

SAFFRON
1 bx $150 C of Alexandria, Campeache

SARSAPARILLA
10 bls $465 Portuense, Pernambuco

SOAP
3 bxs $60 Mosser, Cape Town
6 bxs $102 Alvo, Kingston
2250 bxs $1368 Alvena, Hayti
2 bxs $63 C of Columbia, Vera Cruz
1 bx $9 J C Noyes, Pt Natal
75 bxs $225 Portia, St John's, N F
7 bxs $508 France, London
500 bxs $395 W A McKay, Jacmel
10 bxs $32 Kaluna, St Kitts
1100 bxs $1860 Colon, Aspinwall
12 bxs $49 Trinidad, Hamilton
940 bxs $947 Portuense, Para
2 bxs $31 Santiago, Cienfuegos
1 bx $14 Muriel, St Pierre
2850 bxs $1662 Alert, Hayti
400 bxs $200 Flamborough, Cape Hayti
695 bxs $959 Strathleven, Shanghai
20 bxs $25 M Standish, San Andreas
2 cs $220 Republic, Liverpool

SODA CAUSTIC
13 dms $159 Alvo, Savanilla
12 dms $174 Santiago, Cienfuegos
3 dms $70 Santiago, Nassau
10 dms $150 Americus, La Guayra
7 dms $145 Odin, C Bolivar
14 dms $244 Philadelphia, La Guayra

SODA SAL
20 bbls $75 Santiago, Cienfuegos

SPERMACETI
3100 lbs $1300 Polaria, Hamburg

SPONGE
5203 lbs $4740 La Bretagne, Havre
2500 lbs $1350 France, London
2000 lbs $1416 Moravia, Hamburg

STARCH
1 bbl $6 W C Greene, Hamilton
125 bxs $780 Polaria, Hamburg
6 bxs $16 Trinidad, Hamilton
22 pgs $75 Colon, Aspinwall
5 cs $42 Muriel, St Croix
200 bxs $400 Patmos, Montevideo
30 pgs $105 Anchoria, Glasgow

STEARINE
183132 lbs $13000 Schiedam, Amsterdam
11842 lbs $740 E Monarch, London
6875 lbs $4075 Colon, Aspinwall

SUMAC EXT
15 bbls $275 Buffalo, London

TALC
20000 lbs $100, Strathleven, Yokohama

TALLOW
1250 lbs $75 J R Talbot, Arroyo
422400 lbs $16896 Schiedam, Amsterdam
18000 lbs $1620 Ethiopia, Glasgow
7483 lbs $367 Alvo, Pt Limon
800 lbs $68 Alvena, Hayti
59158 lbs $.813 Durham City, Newcastle
28923 lbs $1265 Marengo, Hull
6885 lbs $429 City of Alexandria, Campeache
300 lbs $17 Colon, Colon
1434 lbs $90 Muriel, Trinidad
13470 lbs $537 D M French, St Pierre
268 lbs $18 Philadelphia, La Guayra
48000 lbs $960 State of Nevada, Glasgow

TALLOW SCRAPS
103300 lbs $1694 Buffalo, London

TAR
10 bbls $29 Alvena, Hayti
3 bbls $7 L G French, Baranquilla
12 bbls $29 Phoebe, Mayaguez
20 bbls $29 Rising Sun, Bridgetown
6 cs $10 San Marcos, Havana
6 bbls $13 Welhaven, San Juan, P R
15 bbls $35 Muriel, Trinidad
8 bbls $13 Odin, C Bolivar
2 bbls $7 Philadelphia, La Guayra

TURPENTINE
1000 gls $420 Tasma, Santos
150 gls $62 Alvo, Kingston
142 gls $72 Alvo, Savanilla
20 gls $9 Alvo, Pt Limon
74 gls, $38 Alvena, Hayti
24 gls $11 L G French, Baranquilla
170 gls $700 Mabel, Callao
50 gls $22 Phoebe, Mayaguez
99 gls, $43 San Marcos, Havana
100 gls $40 Welhaven, San Juan
600 gls $346 J C Noyes, Pt Natal
47 gls $19 Kaluna, St Kitts
310 gls $134 Santiago, St Jago
240 gls $110 Muriel, Barbadoes
110 gls $55 Colon, Aspinwall
97 gls $44 Muriel, Trinidad
50 gls $20 Odin, C Bolivar
230 gls $94 Philadelphia, La Guayra

VARNISH
10 gls $5 Alvo, Kingston
120 gls $30 Alvo, Savanilla
10 gls $8 Alvo, Pt Limon
10 gls $5 Alvena, Hayti
336 gls $269 San Marcos, Havana
322 gls $437 C of Columbia, Vera Cruz
5 gls $15 Welhaven, San Juan
180 gls $188 Santiago, Cuba
40 gls $41 Colon, Aspinwall
237 gls $262 Patmos, Montevideo
20 gls $15 Odin, C Bolivar
50 gls $84 Philadelphia, La Guayra

WHITING
10 bbls $38 Philadelphia, La Guayra

WHITE LEAD
30 kgs $60 Colon, Aspinwall

Baltimore Exports.

BARK EXTRACT
20 bbls, Bengore Head, Belfast
50 bbls, J C Smith, Demerara
GREASE
10490 lbs, Mentmore, L'pool
OIL ANIMAL
250 gls, Portuense, Cera
OIL CAKE
1540 sks, Bengore Head Belfast
600 sks, Mentmore, L'pool

San Francisco Exports.

ASPHALTUM
1200 lbs, Mexico, Victoria
CORKS
1 bl, Mexico, Victoria
GINSENG
3243½ lbs, C of Sydney, China
GLUCOSE
1 csk, Mexico, Victoria
HOPS
1990 lbs, C of Sydney, Japan
OPIUM CRUDE
603 lbs, C of Sydney, China
SOAP
5 bxs, Mexico, Victoria
SPICES
1 pkg, Mexico, Victoria

Philadelphia Exports.

BARK
430 bgs, Austrian, Glasgow
BONE BLACK
10 bbls, Indiana, L'pool
HOPS
100 bls, Indiana, L'pool
OIL LUBRICATING
25 bbls, Austrian, Glasgow
OILCAKE
1075 bgs, Indiana, L'pool
TALLOW
60 hhds, 100 bbls, Indiana, L'pool
25 cks, Austrian, Glasgow
For the week ending Dec. 24, 1887, not before published.
EXTRACTS
25 bbls, British King, Liverpool
GREASE
100 tcs, British King, Liverpool
OIL COAL
5 cs, Anna, Cienfuegos
OIL LUB
375 bbls, British King, Liverpool
OIL CAKE
1550 bgs, British King, Liverpool
ROSIN
379 bbls, Lindola, Oporto
TALLOW
100 cks, British King, Liverpool
WAX
300 bbls, British King, Liverpool

Charleston Exports.

COTTONSEED
1052 sks, Sagona, Liverpool
PHOSPHATE ROCK
350 tons, Sagona, Liverpool
ROSIN
2600 bbls, Quirenale, Genoa

New Orleans Exports.

COTTONSEED MEAL
3199 sks, Andean, Liverpool
840 tons, M Bedlington, Antwerp
LEAD
1343 pigs, Discoverer, Liverpool
OIL CAKE
3841 sks, Andean, Liverpool
7692 sks, Australia, Liverpool
47 tons, M Bedlington, Antwerp
500 tons, Cadiz, Liverpool
OIL COTTONSEED
2600 bbls, M Bedlington, Antwerp
SOAP
20 bxs, S Oteri, Truxillo

Boston Exports

BEESWAX
1 pg, Delight, St Johns
CANDLES
1 cs, Alert, Haytien Ports
COTTONSEED MEAL
2378 sks, Virginian, Liverpool
40 bgs, Dominion, Yarmouth
HOPS
41 bls, Iowa, Liverpool
OIL
25 cs, Alert, Haytien Ports
80 bbls, Virginian, Liverpool
OIL CAKE
1530 bgs, Cephalonia, Liverpool
700 cks, Iowa, Liverpool
PAINT
40 cs, Virginian, Liverpool
75 cs, 150 cans, Kate, Halifax

PAINT, COPPER
1 cs, Hondo, Jamaica
PITCH
35 bbls, Juno, St John
STEARINE
25 hhd , Iowa, Liverpool
TAR
25 bbls, Juno, St John
WHITE LEAD
10 kgs, Alert, Haytien Ports

Departure of Steamers to Europe.

FROM NEW YORK.

Steamers.	Sails.	Destinatio
Werra	Jan 18	Bremen
Adriatic	Jan 18	Liverpool
Egypt	Jan 18	Liverpool
Suevia	Jan 19	Hamburg
State of Indiana	Jan 19	Glasgow
Devonia	Jan 21	Glasgow
Umbria	Jan 21	Liverpool
Ohio	Jan 21	Liverpool
La Gascogne	Jan 21	Havre
Switzerland	Jan 21	Antwerp
Amsterdam	Jan 21	Rotterdam
Celtic	Jan 25	Liverpool
Ems	Jan 25	Bremen
Rugia	Jan 26	Hamburg
Edam	Jan 28	Rotterdam
Bourgogne	Jan 28	Havre
Servia	Jan 28	Liverpool
Furnessia	Jan 28	Glasgow
Eider	Jan 28	Bremen
City of Berlin	Jan 28	Liverpool
Westernland	Jan 28	Antwerp
Wisconsin	Jan 31	Liverpool
Saale	Feb 1	Bremen
Germanic	Feb 1	Liverpool
State of Pennsylvania	Feb 2	Glasgow
Bohemia	Feb 2	Hamburg
Republic	Feb 3	Liverpool
Fulda	Feb 4	Bremen
La Champagne	Feb 4	Havre
Gallia	Feb 4	Liverpool
Poland	Feb 4	Rotterdam
Circassia	Feb 4	Glasgow
Pennsylvania	Feb 4	Liverpool
Nevada	Feb 7	Liverpool
Trave	Feb 8	Bremen
State of Georgia	Feb 9	Glasgow
Rhaetia	Feb 9	Hamburg
Elba	Feb 11	Bremen
La Bretagne	Feb 11	Havre
Moravia	Feb 16	Hamburg

FROM BOSTON.

Palmyra	Jan 19	Liverpool
Carthagenian	Jan 23	Glasgow
Michigan	Jan 24	Liverpool
Pavonia	Jan 26	Liverpool
Palestine	Jan 28	Liverpool
Samaria	Feb 2	Liverpool
Siberian	Feb 6	Glasgow
Cephalonia	Feb 9	Liverpool

FROM PHILADELPHIA.

British Princess	Jan 18	Liverpool
Vaderland	Jan 18	Antwerp
Lord Gough	Jan 25	Liverpool
Hibernian	Jan 26	Glasgow
British King	Feb 1	Liverpool
Norwegian	Feb 3	Glasgow
Lord Clive	Feb 3	Liverpool
Nederland	Feb 8	Antwerp

FROM BALTIMORE.

Oranmore	Jan 19	Liverpool
Sarmatian	Jan 24	Liverpool
Assyrian	Jan 24	Liverpool
Baltimore	Jan 26	Liverpool
Oregon	Jan 31	Liverpool
America	Feb 1	Bremen
Nessmore	Feb 2	Liverpool
Polynesian	Feb 7	Liverpool
Mentmore	Feb 9	Liverpool
Vancouver	Feb 14	Liverpool
Weser	Feb 15	Bremen

FROM SAN FRANCISCO.

City of Rio Janeiro	Jan 21	Yokohama, etc
Gaelic	Feb 1	Yokohama, etc
Zealandia	Feb 9	Honolulu, etc
City of New York	Feb 11	Yokohama, etc

TOTAL PACKAGES AND VALUES OF IMPORTS.

As returned by the Custom House for the week ending Jan. 13, 1888:—

	Quantity	Value
Glass plate	293	$53165
Glass, window	19662	21203
Looking glass plate	251	45086
Annatto	16	263
Arsenic	200	1032
Acid, benzoic	1	40
Acid, citric	25	1584
Acid, all other	28	3209
Aniline colors	339	23539
Ammonia, carbonate	25	787
Ammonia, muriate of	27	950
Argols	1866	75.00
Alum	203	1016
Albumen	25	2771
Alizarine	149	9332
Asphalt		1610
Balsam copaiba	2	50
Balsam tolu	14	124
Balsam, other	2	82
Bark, Peruvian	1	3
Bark, cinchona	89	5517
Bark, other	3	50
Barytes, sulphate		324
Bleaching powder	332	6966
Brimstone		9 34
Bronze powder		19944
Butter, cocoa	65	3906
Chalk		970
Calomel	10	400
Chemical salts	67	1804
Chicory	726	4502
Cinchonidia	23	650
Cochineal	104	4390
Coca leaves	90	2000
Colocynth	15	730
Cutch	100	801
Cubebs	2	237
Cuttlefish bone	3	52
Dextrine	111	2.9.
Divi divi	621	846
Dyewood extract	80	3637
Ergot	8	610
Fish sounds	47	517
Flowers, arnica	21	140
Flowers, insect	27	3389
Flowers, saffron	1	447
Fullers earth	1583	1190
Gambier	4810	51092
Gelatin	45	1109
Glycerine	310	2574
Gum arabic	80	995
Gum aloes	13	291
Gum copal	20	700
Gum camphor	1362	26764
Gum kaurie	3620	76194
Gum, licorice	50	1188
Gum shellac	1321	25477
Gum senegal	55	5022
Gum tragacanth	73	8403
Gum, other	1432	2 r3
Glue	168	12166
Insect powder	15	616
Indigo	71	1557
Indigo auxiliary	16	618
Indigo, extract of	7	287
Indigo substitute	6	19.
Isinglass	6	212
Laurel leaves	8	139
Locust beans	98	124
Madder	6	3 6
Manuring salt		170 2
Morphine	1	14 9
Nutgalls, ext of	7	410
Nux vomica	329	708
Orchilla liquor	13	809
Oxide of zinc	119	909
Oil, bergamot	4	600
Oil, citronella	36	467
Oil, cod	296	2389
Oil, cocoanut	375	21680
Oil, cloves	9	488
Oil, Haarlem	1	49
Oil, juniper	2	61
Oil, lemon	33	1131
Oil, myrbane	25	304
Oil, orange	2	394
Oil, olive	326	45 6
Oil poppy	1	29
Oil, rapeseed	10	237
Oil, rose	6	8711
Oil, rosemary	10	280
Oil, tanners'	95	433
Oil, other essential	31	4721
Oil, all other	24	477
Opium	12	5470
Paints, unspecified		10740
Paints, Berlin blue	7	251
Paints, chrome yellow	5	26
Paints, colcothar	33	246
Paints, drop black	74	1:35
Paints, iron oxide	91	823
Paints, ocher	54	666
Paints, orange mineral	104	3061
Paints, red lead	8	506
Paints, sienna	9	62
Paints, umber	1	4
Paints, Venetian red	507	1310
Paints, white lead	88	1 04
Potash, bichromate	100	4779
Potash, chlorate	285	6376
Potash, caustic	5	63
Plumbago	1478	166 4
Potato flour	1300	5259
Quinine	61	16723
Root, arrow	70	56
Root, gentian	26	180
Root, licorice	7	105
Root, rhubarb	43	824
Root, sarsaparilla	2	42
Root, squills	83	465
Roots, valerian	100	664
Roots, all other	217	6618
Salt cake	317	286
Safflower, extract of	5	414
Sage leaves	25	150
Senna	33	861
Soda ash	779	16231
Soda, carbonate	140	517
Soda, caustic	1215	12846
Soda, hypo of	525	315
Soda, nitrate	25179	93209
Soda, salt	50	300
Soda, sulphate	2	3
Sponges	435	7182
Sumac	2956	9171
Sumac, extract of	42	910
Tonka beans	14	402
Terra alba	360	667
Ultramarine	109	2725
Turmeric	10.0	747
Vanilla beans	5	1150
Varnish	16	779
Wormseed	19	118
Other drugs		20911
Dutch metal	9	1004
Lead, pigs	5	4
Chillies	97	218
Cloves	163	4968
Ginger	500	1118
Nutmegs	267	8086
Pepper	449	6752
Corkwood		13459
Empty barrels		14745
Logwood, M lbs	3980	35509
Sapanwood		193
Candles		796
Clay		3534
Carbon		320
Corks		3760
Cocoa, preparations of	195	5174
Hops	410	26300
Matches	100	603
Musk	3	3864
Portland cement	8.70	7206
Perfumery	30	110 4
Sago	700	5509
Seed, annatto	1	3
Seed, anise	27	137
Seed, caraway	60	309
Seed, celery	9	107
Seed, fennel	10	113
Seed, hemp	500	1413
Seed, lycopodium	63	4.36
Seed, rape	1	4
Linseed	14423	53478
Soap	36	13 3
Soap, castile	4	69
Soap stock	100	1131
Tapioca	19.8	10864
Wax		2781

GOODS ON THE WAY TO THE UNITED STATES BY SAIL.

Auckland

TO NEW YORK
Star of the East, 675 tons kauri gum
Evie Reid, 380 tons kauri gum

Calcutta

TO NEW YORK
Pharos, 1968 bgs saltpeter, 9.5 bgs ginger.
Charger, 1497 bgs saltpeter, 200 bgs cutch, 300 cs shellac, 1100 pkts turmeric
Loanda, 50 cs buttonlac
El Capitan, 1044 bgs saltpeter, 300 bgs cutch, 300 cs shellac, 50 cs buttonlac, 100 cs castor oil
Pythomene, 954 bgs saltpeter, 951 bgs ginger
Lucania, 1052 bgs saltpeter, 496 bgs linseed, 1000 bgs ginger
Galgate, 734 bgs saltpeter, 1511 bgs linseed
Isaac L Skolfield, 600 bgs cutch, 200 cs shellac, 200 cs castor oil, 500 bgs turmeric
Paul Revere, 5000 bgs linseed, 100 cs shellac, 47 cs indigo, 500 bgs myrabolanes
Gowanburn, 4059 bgs saltpeter, 6673 bgs linseed, 50 cs shellac, 80 cs buttonlac, 104 bgs ginger
Record, 1214 bgs saltpeter
J W Marr, 150 cs shellac

TO SAN FRANCISCO
Bhotan, 275 cs shellac

TO BOSTON
Warrior, 600 bxs cutch

Colombo

TO NEW YORK
Annie M Smull, 350 tons cocoanut oil 140 tons plumbago, 4.857 lbs citronella oil

Cirgenti

TO NEW YORK
Glacie, 880 tons seconds brimstone

TO PORT ROYAL
Leticia, 500 tons thirds brimstone

Hiogo

TO NEW YORK
Annie H Smith, 3462 pls camphor

Hong Kong

TO NEW YORK
McNear, 5150 pgs cassia, 50 cks soy, 30 cs essential oil

Lisbon

TO NEW YORK
Tafal, 196 bls corkwood

TO PHILADELPHIA
Conquistatore, 1455 bls corkwood

Marseilles

TO NEW YORK
Rosa, 50 cks ocher, 250 cs bitumen, 1320 cs soap 225 bls canary seed, 58 bls roots, 7 bls flowers 75 cs essence

Singapore

TO NEW YORK
Naupactur, 1599 pls gambier, 1603 pls cube gambier, 7561 pls sago flour, 2181 pls gum copal, 842 pls pearl tapioca, 411 pls flake tapioca, 72 pls nutmegs, 30 cs nutmegs transhipped, 50 cs citronella oil.

Smyrna

TO NEW YORK
Angela D'Amore, 4241 bls licorice root, 100 tons emery stone
Giuseppi D Abundo, 3323 bls licorice root, 150 tons emery stone

West Coast South America

TO BOSTON
Conquest, 5000 bgs nitrate soda

TO HAMPTON ROADS
Maggie Dart, 5000 bgs nitrate soda
C P Dixon, 7000 bgs nitrate soda
Iceberg, 10000 bgs nitrate soda

TO NEW YORK
Albert Russell, 8000 bgs nitrate of soda
Linnet, 10000 bgs nitrate soda
Amanda, 10.00 bgs nitrate soda
Countess of Roth, 7000 bgs nitrate soda
Willard Mudget, 9000 bgs nitrate sod

Hampshire, 12000 bgs nitrate soda
Trinidad, 6500 bgs nitrate soda
Weser, 7000 bgs nitrate soda
Empire, 10000 bgs nitrate soda
Zulu, 8000 bgs nitrate soda

TO PHILADELPHIA

Evie J Ray, 10000 bgs nitrate of soda
Duke of Abercorn, 10000 bgs nitrate soda

RECORD OF VESSELS.

PORT & NAME.	SAILED	LAST REPORTED
Auckland.		
Star of the E	Nov 20..	
E Reid.....	Dec 5 ...	
Calcutta.		
Pharos.....	Oct 6 ..	
Charger.....	Oct 19..	Oct 27
Luanda	Oct 20..	
E Capitan....	Oct 27..	
Pythomene..	Oct 29..	
Lucania..	Nov 8	
Galgate.....	Nov 17	
I L Skofield	Nov 13..	
P Revere..	Nov 14..	
Gowanburn .	Nov 16	
Record.....	Nov 20.	
J W Marr....	Nov 23..	
Bhotan.....	Nov 13	
Warri r.....	Nov 18	
Colombo.		
A M smu l ..	Dec 9....	
Girgenti		
Giasee.	Nov 26.	
Letizia	Nov 22	
Hiogo.		
A H Smith..	Oct 26.	
Hong Kong.		
MuN ar.	Oct 22...	New Arjer, Nov 19
Lisbon.		
Talai	Dec 19..	
Conquistatore	Dec 19..	
Ma seilles		
Rosa	Nov 1'..	
Singapore.		
Nauseatus ..	Oct 28..	
Smyrna.		
A D'Amore ..	Dec 16	
G D'Abundo	Dec 12..	
W. C. South Americ a		
Evie J Ray .	Oct 13...	
Albert Russel	Nov 17 .	
Empire... ...		Loading
D of Abercorn	Dec ..	
M Dart	Dec .	
Zulu.....	Dec 8	
Conquest..		Loading
C P Dixon....	Nov 29..	
Iceberg		Loading
Linnet		Loading
Amanda ...	Dec ..	
Countess Roth		Loading
W Mudgett...		Loading
Hampshire ...		Loading
Trinidad . ..		Loading
Weser.....	Dec ..	

Recent Patents.

376,189. PRODUCTION OF SULPHITE SOLUTIONS. Filed Oct. 18, 1886. Issued Jan. 10, 1888.

376,190. PRODUCTION OF SULPHITE SOLUTIONS. Filed July 21. 1887. Issued Jan. 10, 1888.

376,345. MANUFACTURE OF TANNIN EXTRACTS. Filed Mar. 14, 1887. Issued Jan. 10, 1888.

376,351. APPARATUS FOR MAKING AMMONIUM SULPHATE. Filed Aug. 13, 1886. Issued Jan. 10, 1888.

376,366. PROCESS OF OBTAINING POTASSIUM CARBONATE. Filed Aug. 10, 1885. Issued Jan. 10, 1888.

376,392. PRODUCTION OF A NEW RED AZO COLOR. Filed Aug. 13, 1887. Issued Jan 10, 1888.

Iodide of Starch.

BY H B. STOCKS.

Besides the ordinary method of formation (i. e., by adding a solution of iodide to starch paste), iodide of starch is gradually formed when dry starch and an alcoholic solution of iodide are triturated in a mortar, provided the alcohol contains water. With absolute alcohol a brown color is produced which, on the addition of water, changes to blue. It appears, therefore, that water is necessary to the formation of iodide of starch.

Iodide of starch is not formed when iodine vapor is passed over dry starch, but by using moist starch the iodide is formed. This also seems to show that water is necessary for the formation of this body.

It is formed by the action of various reagents on a mixture of potassium iodide and starch paste. The reagents are those which liberate iodine from its compounds—chlorine, bromine, nitric acid, strong sulphuric acid, ferric chloride, ozone (Schonbein), potassium permanganate, potassium bichomate, etc., produce the blue color.

The blue color produced by chlorine and by bromine is destroyed by excess of the reagents; excess of nitric acid or of sulphuric acid also destroys the compound.

In a paper by F. Mylius (*Ber.*, xx., 688, abstracted in *Journal Soc. Chem. Industry*) it is stated that the author has found that the formation of blue iodide of starch is not due to iodide alone, but also to the simultaneous action of hydriodic acid or an iodine salt. After reviewing the experiments that have been done, and repeating those of the author, I come to the conclusion that is not the case. The statements made by Mylius are (1) that a solution of iodine in water does not give a blue color with starch; this is manifestly incorrect, because iodide of starch is formed under these circumstances, (2) That "all the iodine solutions which color starch blue contain hydriodic acid or an iodine salt." This may be answered in the same way, iodide of starch being formed when a solution of pure iodine is mixed with starch paste, or when iodine vapor is passed over moist starch. (3) "If a compound be present which destroys hydriodic acid—e. g., chlorine—no blue iodine starch is formed."

With regard to this statement, Millier says that chlorine destroys iodide of starch, owing to the formation of chloride of iodine. This I think much more correct than the above.

The real fact is that a limited amount of chlorine, added to a mixture of hydriodic acid or an iodide and starch paste, colors it blue, owing to liberation of iodine, but excess of chlorine destroys the color. It may be that chlorine takes the place of iodine in the compound with starch, as a compound with bromine is known. (4) "A silver solution decolorizes iodine starch; on the addition of iodine, the mixture becomes yellow, but hydriodic acid, or one of its salts, restores the blue color." Repeating this experiment, it was found that, on adding silver nitrate to a solution of iodide of starch, the blue was destroyed, with formation of iodide of silver; on adding excess of iodine to this, the blue was reformed; if, however, without adding more iodine, hydriodic acid or one of its salts certainly produced a blue color; but this is simply explained when we take into account the action of nitric acid. I have not been able to find in books to which I have access what action iodine has on a solution of silver nitrate, but I believe that a portion of nitric acid is liberated, and this acts on hydriodic acid or its salts, liberating iodine, and thus we get the blue color.

I have stated the above in a concise manner, so as to show upon what grounds Mylius bases his idea that hydriodic acid or an iodine salt is necessary to the formation of iodide of starch.

Iodide of starch is soluble in a large quantity of pure water. As ordinarily prepared, it is an opaque blue mass, and when examined under the microscope is seen to consist of blue flocculent masses of the iodide floating in a liquid portion.

This shows that the idea of Liebig and others, that the color of iodide of starch was due to the starch granules being mechanically colored by iodine being deposited on their surface, was not correct, as in the above case the granules were entirely broken up.

On examining starch granules colored by iodine, it appeared as if the whole of the interior of each granule were colored. The iodine evidently has penetrated through the coating of starch cellulose into the inner portion, which consists of real starch.

The chief peculiarity of iodide of starch is the readiness with which the color is destroyed by heat. The change is gradual, the liquid becoming first greenish, then yellowish, and finally colorless. If, after boiling the iodide of starch until colorless, it be allowed to cool, the blue is not reformed. Pelletier states that the blue color is reformed on cooling, providing all the iodine has not been driven off by the boiling. If the heating is stopped at the yellowish stage, and the liquid allowed to cool, the blue is reformed to a slight extent, more so if only the greenish stage has been reached, but neither regain the original intensity of color, showing loss of iodine. During the heating the smell of iodine was noticed in the escaping vapor.

With regard to the decolorization of iodide of starch by heat, Baudrimont says that it is due to the volatilization of the iodine, and states that it does not occur in sealed tubes, when concentrated iodide of starch is used, or when the liquid contains excess of iodine. He also states that dilute iodide of starch, heated in a sealed tube thirty or forty times, was decolorized each time, and regained its blue color on cooling. Kraut states that iodide of starch becomes colorless when heated in a sealed tube for some hours.

It was found that a solution of iodide of iodide of starch, when heated in a sealed tube, became colorless in an hour, and did not regain its blue color on cooling; a solution containing much more iodine than the last required three days' heating before it was decolorized, and it remained colorless on cooling. It is evident, therefore, that when iodide of starch is decolorized by heat, iodine is not necessarily volatilized, as stated by Baudrimont, and that his solutions were not heated long enough, or they would have been decolorized. Langlois states the same, that a concentrated solution of iodide of starch was not decolorized on boiling. The same remark may be applied here, namely, that the solution was not heated long enough, or it would have become colorless, as a very strong solution I tried, though requiring much boiling, eventually became colorless.

The decolorized iodide contains iodine in some form. It seams, then, that the iodine goes into combination as some colorless body as no free iodine is present in the boiled solution. This is evidently the case, as blues containing much iodine take a longer time to decolorize than those only containing a small quantity, or, in other words, time is required for the decomposition of the iodide of starch and formation of the new body. This is stated to be hydriodic acid by Kraut; Pelletier and Fritzsche says it contains no free hydriodic acid; Langlois says it contains iodic acid. My experiments confirm those of Kraut. The starch is apparently not altered, for on adding more iodine to the decolorized liquid the blue was again formed, and this decolorization and coloration may be continued a number of times without any effect upon the starch. In open vessels only part of the iodine is converted into hydriodic acid, the rest being volatilized; in sealed tubes, however, all the iodine is converted into hydriodic acid.

If we now refer to the tituration of an alcoholic solution of iodine with dry starch, we shall find that the iodide was not formed. This is mentioned by Pohl, who says that the alcohol overcomes the attraction of starch for iodine, but on adding water the iodide is formed, owing to its weakening the effect of the alcohol.

If absolute alchol be added to a solution of iodide of starch, it is thrown out of solution but the alcohol has no action upon it. I think, therefore, that the reason why iodide of starch was not formed in the above case is because of the absence of water, which seems to be necessary to its formation (see action of other reagents below).

With regard to the action of other reagents on iodide of starch, sunlight decolorizes it, as stated by Raspail, Guibort, and by Payen. A tube of iodide I exposed to diffused sunlight required about nine months to decolorize it. I expect the action of sunlight is similar to that of heat, only much slower, but have not yet examined the product, as my first tube was destroyed; however, I have another experiment in progress with a parallel tube kept in darkness.

Iodide of starch is is precitated from its solution by dilute hydrochloric, sulphuric, and nitric acids, strong hydrochloric acid, and by solutions of salts which do not act upon it, such as sodium chloride, barium chloride, etc.

Starch solutions are not precipitated by dilute acids, as the iodide is. Strong nitric acid and strong sulphuric acid decompose the iodide.

Acetic acid does not precipitate the blue compound.

The blue compound is destroyed by chlorine (Henry and Humbert), by bromine (as before stated), by sulphurous acid, by hydrosulphuric acid (Langlois), arsenious acid (Pisani), alkalies, etc. According to Pisani, the blue is destroyed by trichloride of antimony, chloride of arsenic, auric chloride, ferrous, manganous, mercurous, mercuric, and silver salts.

It is stated by Payen and Langlois that alcohol and ether abstract a part of the iodine from iodide of starch, but I did not find this to be the case, unless an excess of iodine is present, as a solution of iodide of starch treated with ether gave iodine up at first, but on repeated treatment with ether it still remained blue, but gave no iodine. A solution treated with alcohol gave up no iodine.

Starch has, therefore, more affinity for iodine than has alcohol or ether, or any other solvent for iodine I have yet tried. A solution of iodine in carbon bisulphide or benzine, when treated with starch paste, lost all all its iodine, it combining with the starch; and oppositely, carbon bisulphide or benzine do not extract any iodine from iodide of starch, when it contains no excess of iodine.

Therefore I think we are justified in regarding iodide of starch as a compound, or probably more than one compound, of starch with iodine, water also being taken into account, and refer its decolorization by heat to the fact that the iodine contained in it is converted into hydriodic acid.

Many analyses have been made of iodide of starch and formulæ proposed, but as the figures are so widely different, it will be necessary to estimate the amount of iodine in iodide of starch prepared in different ways. I have not yet made any analyses of iodide of starch, but intend to do so if circumstances permit.

As the blue color produced by the action of iodine on starch is of an interesting nature, I may mention as a sequel the few other cases in which a blue color is produced by addition of iodine to organic substances.

1. A blue color is produced when iodine is added to a solution of Iceland moss or Carrageheen moss. This is due to the substance called lichenin, which is similar to starch in its composition and properties.

2. By the action of sulphuric acid on cellulose a body is produced which is blued by iodine.

3. In a paper by Frank E. Lott (*Journ. Soc Chem. Ind.*, 495, 1887), in a description of Fritz's butyl bacillus, he says: "The contents of the cells are partly colored by iodine of a violet approaching black, either the whole contents or single isolated patches of it (two or three) or sometimes only one spot. I might add that the reaction with iodine does not take place at all stages of the growth of this organism. It depends, also, to a great extent, on the nourishing medium."

It is most probable that in the last two cases it was really starch that gave the blue color.—*Chemical News.*

Toilet Soaps by the Cold Process.

(Continued from p. 51, Jan. 11th.

Another kind of soaps, for which there is also a large demand, are the variously colored soaps, e. g. rose soap colored rose or red, honey soap colored pale or orange yellow, violet soap brown, Windsor soap white, yellow, but mostly brown, and the different soaps having the odor of flowers, such as: mignonette, and lily of the valley soap, herb soap, alpine flower soap, &c. In the following, I will give a number of formulæ for such soaps, preceding them by some remarks on soap colors.

The quantities of colors mentioned, are to be used for 50 kilos of soap. A pale rose color obtained by using 12 gms. brilliant rose, and a deeper shade with 10 gms. cochena red and 2½ gms. brilliant red. A deep fiery red is obtained by using 15 gms. cochena or cardinal red. A fine canary yellow (not greenish) with 10 gms. aniline yellow; a greenish yellow with 10 gms. uranium yellow. For orange yellow color with 15-20 gms. uranine yellow or saffron substitute. A very fine brown is obtained by using 25-30 gms. leather brown, or 30-40 gms. brilliant brown. The brown color of the genuine English violet soap is largely due the violet root used, together with palm oil and storax. This is a so-called natural color, i. e., a color which is produced by the materials employed in the preparation of the soap. All the above mentioned colors are soluble in water, and insoluble in oils. They should therefore be dissolved in sufficient boiling water, to effect complete solution, and avoid the causing of stains in the soap.

A few formulæ for rose soaps are as follows:

ROSE SOAP. I.

50 kilos cocoanut oil,
25 kilos lye of 38 deg. B.,
4 kilos water.
Color—8 grams cochena red.
1 gram brilliant rose.
Perfume—175 grams oil of bergamot,
250 grams oil of geranium.

ROSE SOAP. II.

50 kilos cocoanut oil,
25 kilos lye of 38 deg. B.,
4 kilos water.
Color—9 grams brilliant rose.
Perfume—220 grams oil of geranium,
100 grams oil of bergamot,
50 grams oil of cloves,
25 grams oil of cedarwood.

ROSE SOAP. III.

50 kilos cocoanut oil,
25 kilos lye of 38 deg. B.,
4 kilos water.
Color—12 grams cochena red.
Perfume—250 grams oil of ginger grass,
100 grams oil of cloves,
50 grams oil of cassia,
50 grams oil of bergamot.

ROSE SOAP. IV.

50 kilos cocoanut oil,
25 kilos lye of 38 deg. B.,
4 kilos water.
Color—300 grams vermilion (ground in oil).
Perfume—150 grams oil of cassia,
200 grams oil of bergamot,
100 grams oil of ginger grass.

I have here given a different color for each soap, leaving it to the soap maker to chose the color he prefers. The best way of introducing the color, whether it is dissolved in water or ground up in oil, is to add it to the cocoanut oil before saponifying. The water used in the soap is then heated to boiling and the color dissolved in it.

In the following I give a number of other formulae for the preparation of the most liked soaps:

HONEY SOAP. I.

50 kilo cocoanut oil,
25 kilo lye of 38 deg. B.,
2 kilo water.
Color—10 gms aniline yellow.
Perfume—240 gms oil of citronella,
50 gms oil of cloves,
60 gms oil of lemongrass,
25 gms oil of peppermint.

HONEY SOAP. II.

50 kilo cocoanut oil,
25 kilo lye of 38 deg. B.,
2 kilo water.
Color—30 gms uranine orange,
Perfume—300 gms oil of citronella,
50 gms oil of bergamot,
25 gms oil of cassia,
25 gms oil of cloves.

HONEY SOAP. III.

50 kilos cocoanut oil,
25 kilos lye of 38 deg. B.,
2 kilos water.
Color—40 gms saffron substitute.
Perfume—250 gms. oil of citronell
60 gms oil of fennel,
110 gms oil of lemongrass,
30 gms oil of peppermint.

VIOLET SOAP.

50 kilos, cocoanut oil,
25 kilos lye of 38 deg. B.,
2 kilos water.
Color—40 gms brilliant brown
Perfume—2½ gms violet root powder
100 gms bal sam Peru,
100 gms oil of lavender,
100 gms oil of cassia,
80 gms oil of gingergrass.

VIOLET SOAP.

50 kilo cocoanut oil,
25 kilo lye of 38 deg. B.,
2 kilo water,
2 kilo violet root powder,
Perfume—200 gms oil of lavender
50 gms balsam Peru,
50 gms oil of geranium,
75 gms oil of sassafras.

VIOLET SOAP. III. (GENUINE ?)

25 kilo tallow,
25 kilo cocoanut oil,
25 kilo lye of 38 deg. B.,
5 kilo violet root powder,
1 kilo orange peel powder,
1 kilo storax.
Perfume—120 gms oil of bergamot

60 gms oil of sassafras,
60 gms oil of citronella,
150 gms oil of lavender.

VIOLET SOAP (GENUINE ENGLISH). IV.

20 kilo tallow,
29 kilo cocoanut oil,
1 kilo palm oil,
24 kilo lye of 40 deg. B. (soda lye),
1 kilo potash lye 40 deg. B.,
2 kilo water,
6 kilo violet root powder,
½ kilo orange peel powder,
½ kilo storax.
Perfume—80 gms balsam Peru,
230 gms oil of bergamot,
40 gms oil of lavender,
1 gm musk grains.
Color—5 gms brilliant brown.

VIOLET SOAP GENUINE ENGLISH, V.

28 kilo tallow,
2 kilo palm oil (crude),
20 kilo cocoanut oil,
23 kilo soda lye of 40 deg. B,
2 kilo potash lye of 40 deg. B,
8 kilo violet root powder,
1 kilo orange peel powder,
1 kilo storax.
Perfume—180 gms oil of bergamot,
50 gms oil of lavender,
20 gms oil of sassafras,
50 gms balsam Peru,
3 gms musk grains.

The last two formulæ give particularly fine soaps, both as to odor and quality, and are very durable. They always retain their fine odor, which is improved by age, and never become rancid. The preparation of these soaps is as follows:

The tallow, cocoanut oil and palm oil are first melted, and allowed to cool at 40 deg. C. This high temperature is necessary on account of the large amount of tallow used, and because the temperature is somewhat reduced by the addition of the violet root powder.

When the fats have cooled to the stated temperature the violet root and orange peel powders, which have been carefully sifted, are stirred in. After the fat contains no more undissolved lumps, the lye is added in a thin stream in the ordinary manner. As soon as the soap thickens, the storax dissolved in warm alcohol is added, but not without having been pressed through a linen cloth to remove the impurities. After combination has taken place, the stirring is continued until the soap is quite thick, and then the perfume is added, together with the musk, which was dissolved about 12 hours before in potash lye of 3 to 4 deg. B.

The soap is then covered, and after it has perfectly cooled it is cut. The odor of such a soap is never as fine at first as it becomes by age. These soaps are never pressed, but simply cut into pieces weighing about 125 gms. and stamped with a hand stamp.

Examination of Croton and Cod Liver Oils.*

BY T. A. ELWOOD.

In a previous paper before this association, on the above subject, I only dealt with four out of the six oils contained in the British Pharmacopœia, having left the oils of croton and cod liver. These two form the subject of my paper this evening.

My examinations have been conducted in much the same manner as last year, but as the processes are fully detailed in that paper, as printed in last year's proceedings of the association, I shall now omit them, describing any additional processes I have used more fully. The vastly different composition of these two oils has rendered it necessary to use more exhaustive treatment.

Croton oil (oleum crotonis vel oleum tiglii) This oil is obtained by expression from the seeds of Croton Tiglium, a plant belonging to the natural order Euphorbiaceæ, and indigenous to the Malabar coast of India. When expressed the seeds yield 50 per cent of oil.

This oil has long been used medicinally for its purgative principles, originally being imported from India, but owing to its very doubtful purity, the seeds are now imported and the oil is mostly expressed in England by the wholesale druggists or oil merchants, and hence the genuineness of the article is insured to the extent that we individually confide in these wholesale houses.

The Indian and English expressed oils vary very considerably in appearance and also in therapeutical effect, so no doubt we are right in placing doubtful confidence in the imported oil.

The Indian oil is of a pale yellow color, not fluorescent, and but slowly oxidizing to resin on exposure to atmospheric action. Subjected to a freezing mixture it becomes turbid throughout its whole volume, and then separates into two portions, the upper stratum being clear and viscid, the lower containing granular fatty masses.

The English oil is much darker, approaching a sherry color: it is more viscid, more readily resinifies by exposure, and subjected to a freezing mixture deposits the granular portions of fat more slowly and does not previously become turbid throughout the whole volume but only towards the bottom of the oil. It is distinctly acid to test paper, slightly fluorescent, and of an acrid taste and rancid odor.

We cannot class croton oil with the drying oils, although several of its properties and characters would indicate its analogy. Its composition is more in harmony with the non-drying oils, and is very complex, consisting of the glycerides of palmitic, stearic, lauric and myristic acids, together with crotonolin and volatile ethers of the fatty series and numerous isomers.

As this oil possesses two different therapeutical agents, or produces two differing effects, cathartic and rubefacient, we may naturally infer that it contains two different principles each possessing one of these properties.

It was, some few years ago suggested by Bucheim that the activity of croton oil was due to an acid he called crotonoleic, but he was unsuccessful in his endeavors to isolate it. I shall refer to this again later in my paper.

In a paper read before the Pharmaceutical Society by Mr. H. Senier, he describes a method of dividing the oil into two parts, one containing the vesicating, and the other the purgative principles. It was by means of alcohol. He does not decide, however, what percentage should compose each of these parts, and hence in so complex an oil as croton we can understand that according to the extent of oxidation so would be the amount soluble in alcohol, and results in this direction would vastly differ. Such, too, is the case, to such an extent, that no reliance can be placed upon the alcohol dissolving power.

I have tried methods for obtaining the oil in different states of oxidation. This I did by putting samples of oil into wide-mouth bottles and tying over with muslin, to prevent extraneous matter getting in, and frequently agitating; by this treatment it oxidized much more rapidly than when stored in the usual tightly corked or stoppered bottles. I should like here to suggest that as the activity of the oil differs according to the amount of oxidation, we ought to officially have some data as to the amount of resin it should contain, or some test whereby the amount of oxidation can be approximately ascertained.

Solubility in Alcohol—In accordance with the statements of Senier, in the paper before referred to, I tried the action of alcohol on different samples of the oil, and found that as a solvent it varied very considerably, some oils being entirely soluble in five parts, the solution remaining permanent; some separated into two portions, after long standing only, whilst others were only partially soluble, there being two distinct layers immediately. I was led to consider this peculiarity due to the amount of free acid, rather than the extent of resinification; so some of my exposed samples were taken and titrated for the amount of free acid with a decinormal soda solution. The neutralized portion was separated, and the remainder shaken with alcohol, when the proportion soluble was considerably less than previous to neutralizing. On evaporating the alcohol, a resinous substance remained still containing some of the vesicating principle.

On reverting to the separated soda salt obtained in titration, upon evaporation and treatment with dilute sulphuric acid a fatty acid separated, soluble in alcohol, and on partial evaporation of the alcoholic solution, traces of the vesicating property of the oil were discovered by a physiological test; but the portion of the oil insoluble in alcohol I also found retained some of these properties.

A few of the samples of oils I worked upon fully accorded with Senier's views and discoveries, but others so widely differed that I am led to draw the following inferences from the average behavior of the samples I investigated:

1st. The vesicating principle may exist partially in the free state and partially in the state of glycerides soluble in alcohol.

2d. That the amount of free acid other than crotonoleic influences its solubility.

3d. That the amount of free fatty acids is in direct proportion to the amount of oxidation the oil has undergone.

4th. That in proportion to the extent of oxidation so is the solvent power of alcohol upon the vesicating property. In *Journal of Society of Chemical Industry*, July, this year, is an extract of a paper by Kobert, differing from Senier, and ascribing both the purgative and rubefacient action of the oil to the crotonoleic acid of Bucheim; my investigations incline me to doubt that statement, as I find that a considerable proportion of the aperient principle is not removed by the process for extracting the acid, which is as follows:

Treat the oil under examination with an excess of hot saturated solution of baryta in a water-bath for some time, keeping it free from atmospheric action. Collect the precipitated barium salts, and wash thoroughly with successive portions of cold distilled water in a stoppered bottle, decanting the aqueous solutions. Dissolve out the portions soluble in ether, distil off the ether at a low temperature and exhaust the residue with alcohol; this dissolves the crotonoleate of barium. Distil off alcohol, and pour into dilute H_2SO_4; the barium is precipitated as sulphate, and the crotonoleic acid liberated. Thus prepared it is of a brown color, remaining liquid at ordinary temperatures, possesses powerful visicating and also slight purgative properties. I am inclined to think this not a simple acid but a combination of two or more. I have not, however, as yet devised a means of separating them but think that when a method is obtained it will be found that one is the purgative and the other the rubefacient. Further, I think that the barium salt of the purgative principle is only partly soluble in alcohol.

My next investigation was to ascertain whether the salt soluble in ether, but not removed by alcohol; contained either of the active principles; but on liberating the acids and using physiological tests I found such was not the case, the acid in its character resembling oleic, which no doubt it was.

My next investigation was upon the alcohol or glycerol produced by saponification, but this I found to be entirely free from both purgative and vesicating properties.

Owing to the short time I have had for the preparation of this paper many investigations I had hoped to conduct have been necessarily omitted, and hence I can only say that the purgative principle is among the fatty acids; that its salts are only slightly soluble in ether or spirit, and that its action is intensified if in presence with the glyceryl radicle. I hope at some future time to lay before this association some further investigations upon this point.

Croton oil, like the drying oils, is not solidified by the elaidin test.

Bromine Absorption.—The average absorption, working upon four samples of oil, two of which were nearly fresh, and the others my oxidized samples, was 42·5 per cent. The process was very tedious, owing to the slow absorption of the halogen, the complete titration taking a week, it being requisite to allow the oil to stand twenty-four hours after each addition of bromine.

Adulterations.—I have found it difficult to tell whether the oil is adulterated to any appreciable extent. Its total solubility at ordinary temperatures in glacial acetic acid will ensure the absence of most of the commoner oils. Its easy saponification with caustic potash will detect the presence of mineral oils. The most likely adulteration is castor oil, which cannot be detected by either of these reactions. The higher specific gravity of castor oil will, however, afford one means of ascertaining its presence.

Detection of Croton Oil in Mixtures.—Shake up the mixture with alcoholic caustic potash, separate the alcoholic layer, add dilute acid, and distil off the spirit. Dissolve the liberated fatty acid in ether, evaporate the ether, and try the physiological effects upon the skin; if after a few hours the pustular eruption and characteristic rubefacient effect is produced, the presence of croton oil is proved.

Codliver oil (oleum morrhuæ vel oleum jecoris aselli) is obtained by pressure from the livers of several species of cod, the chief source being Gadus Morrhua. Nearly all the codliver oil used in England comes from the fishing stations of Norway and Sweden, whilst a little comes from the Newfoundland fisheries.

The fresh livers are heated to a temperature of about 82 deg. C., and then subjected to pressure between folds of calico or linen, or the broken up livers are exposed to the sun in wicker baskets, when the oil exudes and is collected; by these processes is obtained the pale, or virgin oil, which is further purified from higher fatty acids, by freezing and straining.

The livers are then subjected to a greater heat by boiling in water, when more oil can be obtained by expression, or it will float upon the water and is drained off. This oil contains extractive matter, and is of a pale brown color, being the light brown codliver oil of commerce.

If now the livers are further allowed to lie in heaps until they begin to ferment, or if stale livers are taken, by expression with heat a much darker oil exudes, forming the dark brown codliver oil, which contains a great deal of extractive matter and fatty bodies, without at the same time increasing its therapeutical value.

It is now almost universally admitted that the pale oil is the best for use, for whilst containing all the therapeutical value of the darker oils, it is more palatable, more easily retained by the stomach, and in every degree pharmaceutically more elegant.

Characters—It should be transparent at ordinary temperatures, of a pale yellow color, limpid, with but a slight fishy odor and taste. Should not deposit crystals of fat on exposing to a freezing mixture, and should be soluble in all the ordinary solvents for fixed oils, and have a faintly acid reaction.

Action of Alcohol—Not more than 2½ per cent, is soluble in alcohol, the amount increasing according to the color; in the darker oils I have found as much as 8 per cent. soluble, which, upon evaporating off the spirit, left a greasy extractive possessing a very strong fishy odor. If the codliver oil be shaken with an aqueous solution of normal carbonate of soda, strength about 5 per cent, this will neutralize the free fatty acids, and if after separating them from the oil (which must be dried by heating some time to a temperature of about 110 deg. C., and then allowed to cool) the solvent power of alcohol be tried, some of the oil will still be found soluble, proving that some property beyond the free acid is removed by alcohol.

If this solution be subjected to gentle distillation a fishy extractive is left, to which the name morrhuol has been assigned ("Year Book Pharmacy," 1886, p. 234), and which is said to be the active principle. I am not, however, prepared to accept this statement, as it would make the darker oils more valuable and active than the light, since they yield about 4 per cent extractive with about 1·5 per cent in the pale oils. This extractive has an acid bitter taste, contains iodine and bromine, but otherwise the oil seems to lose nothing through its absence.

Composition.—The oil is a mixture of the usual fatty acids which Winkler asserts are in combination with the propyl radicle, but I say most certainly they cannot be entirely connected with that base, since it being a monad radicle and glyceryl, a triad, the saponification would at once make it manifest. I am inclined to think that the halogens are present in combination with propyl, since the above alcoholic extractive treated with ammonia gas gives off so strongly the characteristic odor of propylamine. When iodine was discovered in the oil in 1887, it was supposed to be in combination with potassium, but that was afterwards declared to be improbable, owing to its insolubility in alcohol. I, however, have found a portion is soluble in alcohol, as previously described, especially in the case of the dark oils; but, nevertheless, I do not think it is in combination with potassium, but as I have just said, an organic base. Of the halogens, chlorine is in greatest abundance: that, however, averages not more than 12 per cent., whilst the others average less than ·05 per cent.

De Jongh obtained from the oil a body he calls gaduin, and ascribes the formula $C_{36}H_{40}O_9$. The following was his modus operandi: Saponify the oil with litharge, digest the resulting lead soap in ether which removes the oleate and the gaduin; decompose with H_2SO_4 to remove lead, treat the free acids with caustic soda, dissolve the soda soap in dilute alcohol, expose to temperature of 0 deg. C., when the soap will be deposited. On the addition of H_2SO_4 to the solution the gaduin is obtained.

Upon working out this method, I obtained the body called gaduin, but was only able to identify oleic acid, and hence cannot confirm De Jongh's statement, and am inclined to doubt the existence of a simple substance of so complex a formula.

Exposure to Cold.—The brown oils when exposed to a temperature produced by the mixture of sulphate of soda and hydrochloric acid did not give any deposit of fat, but became more opaque and turbid, their viscosity considerably increasing.

The pale oils when similarly exposed gave a precipitate of fat, which was white and crystalline, and upon collecting was found to be insoluble in ether. It presented the appearance of stearin, and on applying tests to the acid obtained by saponifying with caustic soda and treating resulting soap with dilute sulphuric acid and re-crystallizing from boiling alcohol, the average melting point was found to be 65 deg. C. From this I conclude it is one or other of the stearins, or perhaps a mixture of them with palmitin.

Elaidin Test—Codliver oil does not solidify upon applying this test according to the method described by me in my paper last year; but upon standing twenty-four hours the solution becomes of a very characteristic blood red color, still remaining liquid and with a good deal of flocculent greasy sediment. Although this cannot be looked upon as a test it is nevertheless useful comparatively, but will not detect the adulterations of fish oils.

Bromine Absorption—This investigation, conducted as already described, shows the amount of bromine absorbed to be 80 per cent. I was unable to get the oil to absorb 83·9 per cent, which is the figure given by Dr. Mills. I will here mention that I used carbon disulphide in preference to carbon tetrachloride as a solvent for the oil, as I have found it answer better in all cases where fish oils are under examination. Perhaps the fact of using a different solvent may account for the slight difference we obtain, namely, about 4 per cent.

Tests for Cod Liver Oil in Mixtures—The presence of this oil in others may easily be ascertained. The suspected oil is mixed with soda, lime and ammonic chloride, and then very strongly heated: the reaction of the lime upon the ammonia salt and the propyl salt present in cod liver oil cause the evolution of propylamine, which is at once detected by its very characteristic odor.

Test for the Purity of the Oil—Strong nitric acid is one of the best tests for the oil, as most adulterations cause it to give an immediate brown, instead of the characteristic purple of which I have just spoken.

In the 'Year Book of Pharmacy,' 1886, page 234, is given another test, by means of which seal oil may be detected. It consists of shaking together equal parts of the oil and aqua regia, when, if pure, a dark green liniment should be formed, which becomes brown in half an hour, whereas if adulterated merely a pale yellow liniment is formed.

Many oils, including shark oil, may be detected by means of the sp. gr., being changed, or the viscosity considerably influenced.

Cod liver oil, too, seems to possess the property of retaining more water than most oils, and before taking the sp. gr., it should be dried and allowed to cool again. I have found this to cause a difference of ·002. The darker oils will retain more water than the pale.

There are several other little investigations I should very much liked to have brought before you, but I have been unable, for want of time, to fully carry them out, daylight being such a necessity in those needing color reactions. I have, however, briefly laid before you the essential portions of my practical work, which, if not interesting to you pharmaceutically, may perhaps be chemically.

* *Phar. Jour. and Trans.*

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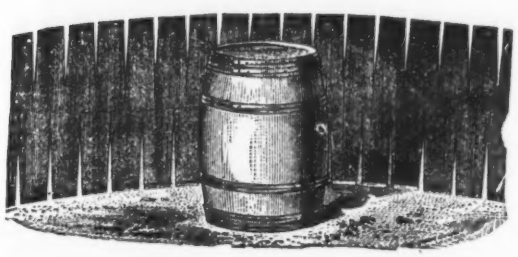

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TUESDAY EVENING, Jan. 17, 1888.

There is a gradual but steady upward movement of prices of nearly all the more important drugs, owing to the apparent paucity of supplies, coupled with an active jobbing demand all along the line. The great staples, opium and quinine, do not participate in this improvement but by many it is believed to be only a question of time when they will respond to the improvement elsewhere. The principal changes since our last were as follows:

ADVANCED.	DECLINED.
Colocynth apples	
Cubeb berries	
Ipecac	
Pariera brava	
Verona orris root	
Senega root	
Oil cassia	
Oil cubeb	
Juniper berries	
Camphor.	

Opium.

The market for opium has been very dull during the week. Buyers have shown no disposition to come forward, except when absolutely in need of supplies for consumption, but on the other hand there has been no disposition to sell and the market has presented a steady tone. For single cases the quotation is nominally $3 85@3 90, and $3 80 represents the lowest figure quoted for large blocks at the close. Continued reports come from Smyrna regarding damage to the growing crop, but they appear to have little weight here. The stock of opium throughout the world has been diminishing steadily, though slowly, and is now said to be as follows by one authority: In London 2,000 cases, New York 950 cases, Smyrna 1,000, and elsewhere, in Turkey possibly, 100, a total of 4,450 cases for a nine months' supply. The average monthly consumption of the world is said to reach 500 cases, which, according to these figures, would leave a deficiency at the beginning of the next crop year.

Quinine.

There can hardly be said to be a market for quinine. There are no buyers except those who really need the stock for current use and these are few as even the retail dealers are more than well supplied. The stagnation is no doubt in a measure due to the uncertainty which has prevailed regarding the probable result of to-day's sale of bark in London, as neither buyers or sellers were in a mood to do business until they had something tangible upon which to base an idea of the probable future course of the market for the alkaloid. The outcome of the bark sale must therefore have been something of a disappointment to holders who after the long interim between the auctions had looked for a stiffer tone to the bark market, than the events of to-day have shown to be the case. At the time of writing the full details of the bark sale had not been received here but cables were at hand to show that about half of the offers, had been sold at a farthing decline from the last auction prices, the unit value being 2¼d. This might have to some extent been anticipated, as the early reports of the sale indicated a sluggish movement. The news was received here too late to-night to have any marked effect upon the quinine market and the best informed did not anticipate any material alteration as the effect of the bark sale. At the close the quotation from second hands for the best brands were 45c but this was purely nominal. It is doubtful, however, judging by the temper of holders, if even the largest buyer could have done better than this to-day.

The receipts of quinine for the week have been 54,700 ozs entered at the Custom House.

Receipts of quinine for the week..	54,700
Since Jan. 1.....	98,100
Corresponding period last year.	81,200

Miscellaneous.

Alcohol has not changed during the week. There are reports of low offerings from outside holders, but we have heard of no sales below $2, the quotation ranging from that to $2 02, according to quantity. There has been a good demand but no important transactions. Wood alcohol is in request at full previous prices.

Borax is firm at our last quotations, and there is reported to be a good jobbing demand.

Cantharides favor the buyer, but not much interest is manifested by the latter and the market closes dull; We quote whole Russian at $1 50@1 60 and powdered at $1 65@1 70. Chinese is quotable at 50@55c for whole and 62½@67½c for powdered.

Colocynth apples have further appreciated in value, the market here being about bare of the Trieste and the Trieste market almost entirely cleared of stock. At the close holders were quoting 46@50c for Trieste and 34@35c for Spanish.

SALOL.

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In lots of 5 lbs. in 1 lb. bottles..	4.35	"
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In lots of 5 lbs in ¼ lb. bottles..	4.50	"
Or assorted lots of 5 lbs. may be made up at best price.		
In 1 ounce bottles	.35	per oz.
In 1 oz. bottles in lots of 25 ozs .	.31	"

SALOL PILLS.

	Bottles of 100 Pills.	Bottles of 500 Pills.
W. H. S. & Co.'s Soluble Salol Pills, 2½ grs.	$ .80	$3 80
" " " 5 "	1.40	6.80

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Sulphate of Cinchonine,	Sulphate of Morphine,	C. P. Acids.
Sulphate of Cinchonidine,	Acetate of Morphine,	Tannin,
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Aconitia,	Papain,	Terpinhydrat,
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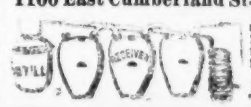

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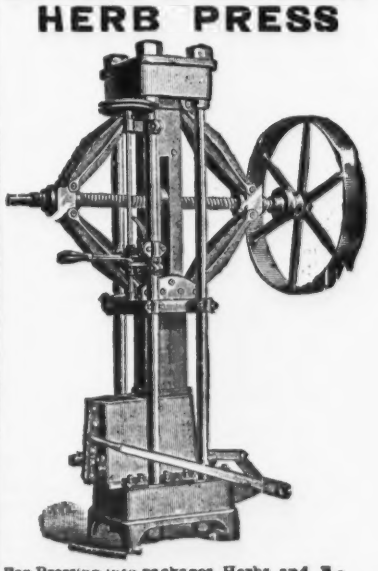

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Norwegian cod-liver oil is in good demand at steady and unchanged prices. We quote sales of 40 bbls within the range of $27@30 as to quality and quantity. Newfoundland is in moderate request and is firmly held at 70@75c per gallon as to size of order.

Ergot has remained very firm at the advance noted in our last. Stocks are closely concentrated here and with very little expected to come forward from the other side, holders show no disposition to force sales, although since we last wrote the market has been very quiet. The closing quotations were 55@60c for Spanish, though some holders declined to shade the outside price on any quantity. Russian was neglected at 45@50c.

Insect powder remains firm and unchanged. During the last few days an active demand has sprung up, and a considerable quantity has been sold for forward delivery at full prices. We quote 45@55c as to brand and quality.

Quicksilver is in jobbing demand only, and the movement is rather slow. The sales making have been mostly at 65c, but in a larger way 62½c would buy. Cables to-day from London quote £9 2 6. The San Francisco *Journal of Commerce*, of the 5th inst., says: "The market is quotable at $48@50; same time last year $38 50@38 75.

"Exports since our last. None.

	Flasks.	Value.
Total since January 1, 1887	18,654	$733,835
Same time 1886	6,901	$257,412

EXPORTS BY RAIL.

	Flasks.	Value.
January	1,200	$46,800
February	....	....
March	900	34,470
April	790	10,810
May	....	....
June	....	....
July	....	....
August	30	1,110
September	85	2 230
October	—	—
November	10	380
Total	2,915	$116,830
Same time 1886	2,747	131,150

Receipts in January, 2,497 flasks: February, 2,018 flasks; March, 2,073 flasks; April, 1,360 flasks; May, 2,070 flasks; June, 1,628 flasks July, 1 75) flasks; August, 1,636 flasks: September, 2,966 flasks; October, 3,063 flasks; November, 2,595 flasks; December, 4,669 flasks. Total 1887, 28,294 flasks; in 1886, 17,626 flasks. Total since January 1, 1888, 265 flasks.

Balsams.

The market for balsam copaiba is very firm in consequence of the absence of supplies in first hands and the fact that there is nothing coming forward. There is considerable inquiry in a jobbing way but it is entirely for consumption. Since we last wrote there have been sales reported of 1,000 lbs Central American at 45c, but there is now nothing offering below 50c, while Para and Maranham are held at 53½@55c and Angostura at 60c. Balsam tolu is quiet and rather easy, the recent arrivals remaining unsold. The nominal quotations are 32@33c. In other balsams there is nothing new to note.

Berries.

The tendency of the market for cubeb berries is upward owing to the extreme scarcity of supplies. There is a fair though not urgent demand. The closing quotations were $1 75@2 for XX and $1 50@1 75 for ordinary, according to holder and quantity. Juniper berries are in small stock, which is in the hands of two or three parties, who are firmly holding for 6½c for new crop lots, though sales might be affected at 6c. It is reported that the increased demand for this drug comes from beer brewers, who use it to flavor a special kind of lager beer. The demand continues strong, and with diminishing supplies, still higher prices are expected.

Essential Oils.

Dealers report a good jobbing demand for most of the articles on the list and the market as a whole may be considered firm. Cassia oil is still advancing and holders now demand 80@82½c, at which there is an active demand but no large sales. Cubeb oil has also continued to advance and there is now nothing offering below $13 50 while in most cases $14 is the quotation. There is a good demand and a considerable quantity has been disposed of at the higher prices. The Messina essences are strong with an upward tendency owing to present and prospective scarcity but no further change in prices has occurred. Peppermint oil is receiving some attention from exporters but home buyers show little interest and prices are therefore somewhat nominal. We note sales of 300 lbs. tin oil for export on private terms. Case oil is now quoted at $2 50@2 60 as to quantity, but most dealers are inclined to hold for $2 65. Sassafras oil is again very scarce, owing to the fact that the production has been materially decreased. It is reported that most of the stills in Virginia have been abandoned, as the distillers have been discouraged from going on by the loss of money they have sustained through low market prices during the last two years. The shipments to hand have all been taken up at 42½@44c and there is nothing offering below 46@49c, as to quantity, gravity, &c. Civet has again advanced in consequence of the great scarcity, and is now held at $3 75@3 85.

Gums.

The general features are the same as those noted for several weeks past. Business is steadily increasing, but we find no special activity in any line. Gamboge remains firm at the recent advance, and the tendency is still upward under small and concentrated supplies. The inquiry for asafœtida is increasing and prices are firmer, but we hear of no important sales. Camphor is higher, refined being now held at 25@26c in barrels.

Herbs and Leaves

We find nothing of particular importance to report in this market. There is a steady movement into consumption all along the line, and prices are well maintained.

Roots.

The market for roots presents quite an active appearance, though business for the most part is confined to small lots to fill current consumptive demands. The export inquiry for golden seal has continued quite fair but no further business of importance has come under our notice. The quotations are maintained at 34@37c, as to quantity and buyer. Ipecac is higher, the advancing tendency noted in our last having continued. An active demand has resulted in sales of 3,500 lbs at $1 30@1 37½ all of which was taken for consumption, and the market closes firm at $1 32½@1 40, as to holder, quality and quantity. Florentine orris root remains very firm at the range of 11@15c as to boldness, whiteness and quality. Stocks both here and abroad are very low, there being nothing now in first hands in this market. It is said to cost more than 12c to lay the root down here now. Verona orris has advanced to 6@8c and is in

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Pure Powdered Drugs and Spices.

See James Chaskel & Co.'s Advertisement on Page 34.

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An Absolutely Pure Extract of Barley Malt and Bohemian Hops Unfermented, Therefore Free from Alcohol.

(All other Malt Extracts contain Alcohol.)

It is especially adapted for administration to patients suffering from nervous exhaustion, feebleness, indigestion, malnutrition, anæmia; also the best article produced for nursing mothers and children. It is very pleasant to the taste. Will keep in any climate if not allowed to freeze.

The diastase contained in our Malt Extract, together with the carbonic gas, renders starchy food immediately soluble by converting the starch into malt sugar and dextrine, in which form they can be readily assimilated by the system, thus creating animal heat and aiding the formation of fat. It is of great aid during lactation, as it increases the amount of sugar and phosphates in the milk, thereby nourishing the infant and supplying strength to the mother.

It will also be found of great value in cases of consumptive tendencies and in the latter stages of phthisis, as it will improve the appetite and assimilate the food, supply the waste of elementary matter and enable the system to resist the effects of the disease. It also acts as a roborant in all cases of debility and is a most valuable addition to the tonic and restorative treatment required in convalescence.

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good demand. Senega root is selling moderately for export, but there is nothing doing on domestic account. The stock is small and prices firm at 46c for Western and 48c for Southern. Pareira brava has continued to advance all the outside lots having been taken up for consumption. The sales for the week aggregate 5,000 lbs. at 18@22c the market closing firm at 25c. Rhubarb is in brisk jobbing request but the inquiry seems to be almost wholly for the low grades. We get sales of 350 lbs. within the range of our quotations.

Shellac.

The shellac market has been devoid of fresh features during the week under review. There is very little demand at the moment, but there is no pressure to sell and a firm feeling still prevails, with the tendency of prices toward a higher basis.

Spices.

The jobbing demand for spices is improving, and since we last wrote a fair business has been done. There are rumors of large sales of pimento, but all we could trace was some 400 bags, which were taken in a jobbing way at about 5½c. Cloves are a little cheaper, and the same may be said of Zanzibar red pepper, while pimento has advanced.

Mr. J. C. Dilworth, proprietor of the Excelsior Manufacturing Co., Pittsburg, called on the REPORTER yesterday, and reports an excellent business in cans, pumps, tanks, etc., for oil dealers.

Since the price of oil of cubebs has reached the figures now quoted, the temptation to resort to adulteration to increase profits has been resorted to by some dealers who do not esteem their reputation as highly as they should and the result is a dangerous mixture that if what we are told is true might come within the jurisdiction of the Board of Health. The adulterant used is cedar oil whose injurious action upon the kidneys is well known, but fortunately the fraud is so easily detected that the merest tyro will not likely be deceived if he use ordinary care.

Report on the Opium Market for 1887.

Messrs. Bowyer & Bartleet of London send us the following review of the opium market:

On the 1st January prices of fine qualities of the undermentioned Turkey opium were as follows: Malatia 12s, Tokat 12s, Salonica 12s 6d, Baloukissar 10s 6d, Smyrna "druggists'" 10s, Beybazaar 10s, Gheve 9s@9s 6d. The year commenced with a steady demand at full prices; the chief inquiry was for "soft shipping" kinds, which being in comparatively small supply, soon began to advance in value; until the fourth week "druggists'" kinds attracted but little attention, but at this time grave fears were entertained for the coming crop owing to drought and frost. Manufacturers, as well as shippers and speculators, became buyers, and every description of opium was taken in large quantities at continually advancing prices, upwards of 1,000 cases being disposed of in a fortnight. In the first week in February prices stood as follows: Fine Malatia 14s, fine Tokat 14s, fine Salonica 13s 6d, Baloukissar 12s, Beybazaar 11s 6d, old Karabissar 11s, new and old Gheve 11s, "Druggists'" seconds 10s 6d@11s. After this there was for a short time less demand, but prices continued to advance. Further improvement in the Smyrna and Constantinople markets caused greater activity here; Malatia and Tokat were bought on Turkish account, and a further rise of 1s was established, all descriptions being dealt in to a considerable extent, and by the middle of March fine "soft shipping" opiums had risen to 16s, and fine "Druggists'" to 12s 6d@13s. Manufacturers and shippers being well supplied the market became quiet, but did not long remain so, as speculators bought fine Malatia, Tokat and Salonica at 15s 9c@16s, and a further advance of 1s@2s per lb. was shortly afterwards established for all fine "soft shipping" descriptions. Baloukissar and all "Druggists'" kinds were in active request, partly for America, and many were taken for speculation on Turkish account. Many parcels were withdrawn from the market. Shortly after this rain fell in Asia Minor, which caused great flatness and a decline in prices, more particularly in "Druggists'" kinds both in Smyrna and Constantinople; this market also became very flat, scarcely any business being done for some time, many owners pressed their parcels on the market, but even at reduced prices progress could not be made; lower quotations were continually received from Smyrna which had a very depressing effect here, more particularly on "Druggists'" kinds, which were freely offered at a considerable decline from the highest prices previously obtained; shipping descriptions were more firmly held, and although there was very little demand, owners were not disposed to make much concession. The depression lasted nearly a month, but towards the end of May, owing to continued drought great fears were again entertained for the crop. The Smyrna market became active, buying orders were transmitted to London, and Karabissar was purchased at 15s, some quantity of old Tokat and Malatia seconds at 14s@16s, and old Salonica at 13s@14s 6d, most of the latter being for export. Shortly afterwards considerable orders were received from America for manufacturing qualities, and large sales were made including Salonica, Angora, old Smyrna and dark Persian at 12s@14s, fine Malatia realized 18s, Tokat 17s 6d, and Salonica, which was very scarce, 18s, with seconds of the above at proportionate values. Constantinople "Druggists'" sold at 14s@15s and old Smyrna at 14s. June commenced very quietly, but holders were very firm. After a few days a good demand again sprung up, and considerable sales were effected chiefly in Malatia and Tokat seconds, but important transactions also took place in very old Yerli and Karabissar and Beybazaar; for fine Malatia 18s was paid, and 16s for old Salonica; shortly after this Gheve realized 14s@14s 9d, and Karabissar was taken on Smyrna account at 16s, and seconds at 14s. During the last few days of June the Smyrna market advanced considerably, which caused holders to be very firm, and further large sales of Malatia and Tokat seconds took place at 13@16s, and fine was readily placed at 18s, while for good quality 17s @17s 6d was paid. After this the market for a long time became very quiet with very little doing, but holders showed no desire to press sales; good old Smyrna sold at 15s, but only to a small extent. During August the market became very stagnant, but prices remained excessively firm, old and new Salonica sold at 20s, and fine Tokat at 19s 6d, but for a few cases good Baloukissar 15s 6d was accepted. Smyrna seconds realized 14s@14s 6d, but only in small quantities. The new crop came to hand very slowly, but the Salonica was mostly of good and fine quality, and sales were made early in September at 20s for fine, and at 17s 6d for seconds. At the same time a moderate quantity of 1886 Tokat was taken at 17s 6d@19s according to quality. Towards the close of September there was considerable activity in the Smyrna market which was continually being pushed up in consequence of an inquiry by the Dutch Government for a large parcel of

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Cold Pressed Castor Oil
IN BARRELS, HALF BARRELS AND CASES.
Office: 8th and Mill St. Station A. Works: Broadway & Belt Line Ave.
KANSAS CITY, MO.
SAMPLES AND PRICES FURNISHED ON APPLICATION.

ROGERS & PYATT,
IMPORTERS,
78 & 80 Maiden Lane, New York.
Shellac, all grades. Verdigris, Pods. Granulated and Powdered
Button Lac, Cudbear.
Seed Lac, Madder,
Stic Lac, Red Argols.
Gum Sandarac, Gum Senegal.
Manufacturers of BLEACHED SHELLAC best quality.

CHAS. H. NORTH & CO.,
SOLE MANUFACTURERS OF
NORTH'S PURE PEPSIN.
With best facilities and large experience we make a Pepsin superior to all others, and will dissolve 1,600 times its own weight of Albumen.
ALSO MANUFACTURERS OF FINEST
PANCREATON, RHEUMATIC, NEURALGIC AND KIDNEY CURE.
Office, 33 & 34 North Market Street,
Correspondence desired. BOSTON, MASS

BOTANIC DRUGGIST—Wholesale.
H. L. JEWELL,
45 N. Front Street, - - - - PHILADELPHIA, U. S. A

BURK OIL CO., Manufacturers.
Water White **CASTOR OIL**
27 & 29 Water Street, NEW YORK.
205 & 207 E. Kinzie Street, CHICAGO.

WHOLESALE PRICES CURRENT.

☞Our Quotations are those of Importers and Manufacturers, for original packages and large lots. For broken lots higher prices are asked.

Oils, Etc.

Vegetable Oils.

Linseed Domestic Raw, in bbls.	₩ gal	55	@ 5
Boiled, in bbls		—	@58
Calcutta, Raw, in bbls		—	@55
Western on spot		54	@56
Rapeseed, in bbls		54	@55
Cottonseed, Crude Prime		36	@37
Crude, off quality		34	@35
Yellow Summer Prime		41	@43
Yellow Summer, off qual.		37	@40
Yellow Summer cooking		—	@—
White Summer		44	@45
Yellow Winter		53	@54
White Winter		54	@54
Soap stock			1¼@ 1¼
Olive, Sicily		66	@70
Spanish		70	@73
Soap Stock		—	@ 4¼
Palm, Prime	₩ lb		4¼@ 5
Off quality			4¼@ 4¾
Cocoanut, Cuban		—	@—
Ceylon			5¾@ 5¾
Cochin		7	@ 7¼
Castor, No. 2		—	@—
No. 3			11½@12
Rosin, First run	₩ gal	—	@ 9
Second run		—	@12
Third run		—	@15
Deodorized		—	@18

Animal and Fish Oils.

Whale, Natural Winter	₩ gal	39	@ 40
Bleached Winter		—	@ 41
Extra Bleached Winter		—	@ 43
Bleached Spring		39	@ 40
Sperm Natural Winter		65	@ 68
Bleached Winter		70	@ 73
Natural Spring		59	@ 62
Bleached "		64	@ 68
Sea Elephant, Bleached Winter		55	@ 56
Unbleached Winter		50	@ 51
Lard, Prime City		64	@ 65
Prime, Western		63	@ 65
Extra No. 1		52	@ 52
No. 1		40	@ 43
No. 2		33	@ 35
Menhaden, Prime Crude		23	@ —
Prime Southern		18	@ 19
Brown Strained		—	@ 25
Light Strained		—	@ 26
Extra Bleached Winter		31	@ —
Bleached Winter		28	@ 28½
Bank		—	@ 24
Straits		—	@ 25
Oleo		9	@ 9½
Cod Domestic, prime		30	@ 33
Newfoundland		—	@ —
Black Fish, Crude		—	@ —
Natural		—	@ —
Bleached Winter		—	@ —
Degras, English		2¾	@ 2¾
French		—	@ —
Tallow Prime			@ 48
Neatsfoot, Prime		60	@ 75
No. 1		55	@ 60
No. 2		45	@ 50
Saponified Red		33	@ 34
Elaine Red		31	@ 32

Mineral Oils.

Paraffine Gas Oil	₩ gal	5½@	6
Paraffine, 22@23 gravity		10½@	18
24@25 gravity		9½@	10
28 gravity		7½@	8
Red Paraffine, 21½ gravity		14 @	15
22½ "		11½@	12½
Neutral Filtered, 32 grav. bloomless		16 @	20
extra cold test		32 @	40
34 gravity, bloomless		15 @	18
37 gravity, bloomless		14 @	16
32 gravity, wool grade		9 @	12
West Virginia, Natural, 29 gravity		17 @	18
Franklin Natural, 32 gravity		— @—	
Smith's Ferry, 33@34 gravity		7 @	8
Black Reduced, 29 gravity, 25@30 c. t.		7 @	8
29 gravity, 15 cold test		7½@	9
29 gravity zero		10 @	11
Summer		6 @	7
Cylinder, Light Filtered		15 @	20
Dark Filtered		12 @	21
Extra cold test		— @—	
Dark Steam Refined		9 @	16

Oil Cake

Calcutta Cake, City	₩ ton	—	@ —
City domestic		$24 25	@24 50
Western, in bags		24 00	@24 25
Cottonseed cake at Memphis		—	@—
do do New Orleans		19 50	@19 75

Oil Meal.

State domestic meal	₩ ton	$26	@ —
Cottonseed meal at Memphis		15 75	@16 00
do do New Orleans		19 25	@19 50

Wax, Candles, Lard, Tallow, Etc

Paraffine Wax, Crude, 124@126 m p	₩ lb	4½@	4¾
128@130 m. p		5 @	5¼
Refined 136 m. p		10 @	11½
Candles, Paraffine 4s and 6s		9½@	11½
12s		10 @	12½
Adamantine 6s, 16 oz		— @	9
14 oz		— @	8
12 oz		— @	7
12s, 16 oz		— @	10
14 oz		— @	9
12 oz		— @	8
Patent Sperm, 4s and 6s		48 @	49
Sperm, 4s and 6s		41 @	42
Stearic Acid		11 @	13
Spermaceti		37 @	38
Lard		7 85@	8 35
Stearine		6¾ @	8¾
Tallow		4 5-16	

Naval Stores.

Sp tur'tine	—@41½	I	1 50@	1 55
St'd rosin	@1 07½	K	1 60@	—
G'd st'd	—@1 10	M	1 80	
H	1 20	N	2 05@	2 10
F	1 25 @1 30	WG	2 50@	2 60
G	1 32½@1 35	WW	2 15@	2 20

Paints, Varnishes, Etc.

White Lead, Zinc Etc.

American Dry White Lead	₩ lb	6 @	6½
Pure White Lead, in oil		6½@	7
English White Lead, in oil		8½@	8¾
Zinc White, Paris, G S, 50 bbls		7¾ less	4 ₩ ct
G S, 25 bbls		7¾	2 ₩ ct
G S, 10 bbls		7¾	1 ₩ ct
R S, 50 bbls		6½	4 ₩ ct
R S, 25 bbls		6½	2 ₩ ct
R S, 10 bbls		6½	1 ₩ ct
Antwerp R S, 50 bbls		6½	4 ₩ ct
R S, 25 bbls		6½	2 ₩ ct
R S, 10 bbls		6½	1 ₩ ct
V M Co., grinding in poppy oil, Green Seal		10½@	10⅝
Grinding in poppy oil, Red Seal		8¾@	9¼
French in Varnish		18 @	20
American Extra Dry		4½@	4½
Off color		4 @	4½
In oil		6½@	6¾
In varnish		14 @	18¾
L. Z. O. German Zinc		5½@	5
China White		10½@	12
Flake White		10½@	12
Cremnitz White		15 @	20

Dry Colors.

REDS.

Carmine No. 40	₩ lb	3 15@	3 50
Crocus Martus, Imported		1½@	3½
Standard American		1½@	2½
Colcothar		3½@	6
Indian Red, American		3½@	6½
Standard American		2 @	3
English		5½@	7
Tuscan Red, English		9½@	11
Turkey Red, English		9½@	14
Litharge, English Flake		9 @	9½
American Powdered		6 @	6½
Red Lead, English		8½@	9
American		6½@	6½
Orange Mineral, English		8½@	
French		8¾@	8¾
German		8½@	9
American		8 @	8½
Rose Pink, English		9 @	9½
American		8 @	8½
Vermillion, Imported English		70 @	71
Am. Quicksilver, bulk		70 @	75
Am. Quicksilver, bags		— @	71
Chinese		— @	17½
Trieste		72 @	77
American		10½@	11
Artificial		8 @	25
Venetian Red, Cookson's		1 40 @	1 45
H.R.Co's Diam'd M		1 45 @	1 50
Diam'd H		1 10 @	1 25
F V A		1 05 @	1 20
L N & Co Diamond H		1 10 @	1 20
H B		1 10 @	1 20
Bell Brand		@	1 45
B O W		— @	1 30
V V R		— @	1 60
Crown		1 40 @	1 50
Lion		1 20 @	1 25
Anchor H		1 10 @	1 30
American		1 00 @	1 30
Cutter		1 30 @	1 35

YELLOWS.

Chrome Yellow		10 @	25
Ocher, Rochelle		1 35 @	1 50
Washed Dutch		5 @	5
Washed French		2 @	
Washed Nat Oxford, Lump		6½@	6¾
Washed Nat Oxford, Powd'r		7 @	7½
Golden		3¾@	4
Domestic		3½@	1¾
Domestic, for O C & W P		¾@	1

GREENS.

Chrome Chemically Pure		22 @	26
Extra		12 @	18
Super		9 @	11¾
Common		— @	8
Paris, Pure		— @—	
In Pulp		11 @	12
French Verdigris		40 @	42

BLUES.

Chinese Blue		45½@	52
Prussian Blue		20 @	30
Soluble Blue		45 @	55
Ultramarine Blue		7 @	25
Celestial Blue		5½@	8
Blue Verditer		25 @	30
Refiners'		60 @	70

BROWNS.

Sienna, Italian, burnt & powdered		6 @	6½
Burnt lumps		3 @	3½
Raw powdered		6 @	7
Raw lumps		3½@	4
American, burnt & powdered		1½@	1¾
American, raw		1½@	1¾
Umber, Turkey, burnt & powdered		3½@	4
Burnt lumps		2½@	3
Raw and powdered		3½@	4
Raw lumps		1½@	2¾
American burnt		1½@	1¾
American, raw		1½@	1¾
VandykeBrown, English		6 @	8
American		3 @	3¾
Spanish Brown		¾@	1

Miscellaneous.

Barytes, Prime White	₩ ton	16 00 @	18 00
Foreign Floated		19 00 @	21 00
Domestic Floated P&K		30 00 @	32 00
Off color		12 00 @	14 00
Chalk		2 50 @	2 75
Kiln Dried	₩ 100 lbs	40 @	—
Air Dried		30 @	35
China Clay	₩ ton	13 00 @	18 50
Cobalt oxide		2 30 @	2 80
Feldspar	₩ ton	14 00 @	
Whiting, Commercial	₩ 100 lbs	45 @	50
Gilders'		60 @	65
Paris White, English Cliffstone		1 05 @	1 15
American		65 @	80
French Talc		1 @	1¾
Terra Alba		75 @	80
English Terra Alba		75 @	80
Blanch Fix	₩ lb	2½@	3
Dentists' Plaster	₩ bbl	1 35 @	1 50
Calcined Plaster	₩ bbl	1 25 @	1 50
Marble Dust	₩ bbl	90 @	1 00
Pumice Stone, original cks	₩ lb	1½@	1¾
Selected lumpsin bbls		2½@	2¾
Powdered Pure in bbls		1½@	2¼
Rotten Stone, original cks		4 @	5
Selected lumps		5 @	7
Powdered, in bbls		7½@	8½
Rubbing Stone		5 @	7
Bronze Powder		— @	
Brocades		45 @	1
Smalt, German Blue		15 @	
Super Black		8 @	1

Putty in bulk — 1¾@— 2
In Bladders — 2 @— 2½
In Tins — 2½@— 2¾

Glues.

Extra White	₩ lb	18 @	22
Medium White		14 @	18
Cabinet		13 @	16
Low grade		11 @	13
Foot stock white		9½@	13½
brown		4 @	8
Irish		12½@	14½
French		9½@	22½
English		10½@	15

Metallic Paints.

Brown	₩ ton	$27 50@	32 50
Red	"	27 50@	32 50
Yellow	"	27 50@	33

Colors in Oil

Black Coach, Japan	₩ lb	30 @	40
In Oil		12 @	13
Drop Black		— @	—
Ivory Black		12 @	14
Lamp Black		12 @	20
Chinese Blue		35 @	55
Prussian Blue		30 @	45
Ultramarine Blue		12 @	21
Burnt Sienna		7 @	14
Raw Sienna		7 @	14
Burnt Umber		7 @	1
Raw Umber		7 @	1
Vandyke Brown		7 @	14
Chrome Green		8 @	14
Paris Green		16 @	24
English Drop Black		12½@	14
American Drop Black		7½@	10
Frankfort Drop Black		25 @	30
Lampblack, Prime		27½@	33
Medium		19½@	26
2d quality		13 @	19
Low grade		6½@	10
Naphtha, Black		60 @	—
Fine Calcined Velvet Black		16 @	25
Medium Calcined Velvet Black		12 @	15

Varnish.

Wearing Body	₩ gal	4 00 @	5 00
One Coat Coach		3 00 @	4 00
Elastic Gear		3 50 @	4 00
Hard Drying Body		3 50 @	4 00
Rubbing Body		3 00 @	4 00
Quick Rubbing		2 50 @	3 50
Black Rubbing		3 00 @	4 00
Extra No. 1 Coach		1 50 @	2 25
Light No. 1 Coach		1 25 @	2 00
No. 1 Coach		1 10 @	1 50
Light Coach Japan		1 10 @	1 50
Extra No. 1, Furniture		1 15 @	1 50
No. 1 Furniture		75 @	1 15
Hard Oil Finish		1 00 @	2 00
Damar Varnish		1 25 @	1 50
Black Asphaltum		75 @	1 00
White Shellac		2 20 @	2 50
Orange Shellac		1 80 @	2 30
Brown Shellac		1 70 @	2 00

Varnish Gums.

Copal, Sierra Leone, cleaned		35 @	40
Zanzibar, Bold white		72 @	75
Medium white		62 @	65
Bean & Pea		35 @	40
Manila, Pale		17 @	20
Bright amber		13 @	15
Standard		10 @	11½
Damar, Batavia		22 @	23
Kauri, Standard		18 @	20
No. 2		14 @	16
Hard Scraped		— @	22
Light hard scraped		— @	37
Picture quality		65 @	70
Pale and Fine Selected		42 @	65
Sandrac		17½@	20
Asphaltum, Cuban, prime		5½@	6½
Cuban, sandy		4½@	5½
Egyptian		8 @	9

Glass.

PLATE AND WINDOW.

FRENCH SINGLE.

Prices per Fifty Feet.

Sizes.	1st.	2d.	3d.	4th
6x 8 to 10x15	$10 50	$ 9 00	$ 8 50	$ 8 00
11x14 to 16x24	11 50	10 75	10 25	9 75
18x22 to 20x30	15 50	14 00	13 00	12 50
15x36 to 24x30	16 50	15 00	13 50	.....
26x28 to 24x36	17 75	16 2	14 75	.....
26x36 to 26x44	19 00	17 50	15 25	.....
26x46 to 30x50	21 00	19 50	17 00	.....
30x52 to 30x54	22 00	20 25	18 00	.....
30x56 to 34x56	23 00	21 25	19 00	.....
34x58 to 34x60	24 00	22 75	21 00	.....
36x60 to 40x60	26 50	24 50	23 00	.....

FRENCH DOUBLE.

Prices per Fifty Feet.

Sizes.	1st.	2d.	3d.	4th
6x 8 to 10x15	$13 00	$12 50	$12 00	$11 50
11x14 to 16x24	16 00	15 00	14 50	.....
18x22 to 20x30	20 50	1 50	18 50	.....
15x36 to 24x30	22 00	20 75	19 50	.....
26x28 to 24x36	25 00	23 00	21 50	.....
26x36 to 26x44	26 00	25 00	23 00	.....
26x46 to 30x50	28 00	26 50	24 50	.....
30x52 to 30x54	30 00	28 00	26 00	.....
30x56 to 34x56	31 00	30 00	28 00	.....
34x58 to 34x60	33 50	31 00	29 00	.....
36x60 to 40x60	36 00	33 50	32 00	.....

Discounts:—70 10 & 5 for S & D.

AMERICAN SINGLE.

Sizes.	1st	2d.	3d.	4th
6x 8 to 10x15	$ 8 75	$ 8 00	$7 50	$ 7 00
11x14 to 16x24	10 00	9 25	8 75	8 00
18x22 to 20x30	12 50	11 50	10 25	9 00
15x36 to 24x30	13 25	12 00	10 75	9 50
26x28 to 24x36	14 50	13 00	11 50	10 25
26x36 to 26x44	15 00	13 50	11 25	11 00
26x46 to 30x50	16 75	15 25	13 75	11 75
30x52 to 30x54	17 50	16 00	14 25	.....
30x56 to 34x56	19 25	17 50	15 75	.....
34x58 to 34x60	20 75	18 75	16 75	.....
36x60 to 40x60	22 25	20 75	18 50	.....

AMERICAN DOUBLE.

Sizes.	1st.	2d.	3d.	4th.
6x 8 to 10x15	$13 00	$12 00	$11 00	10 00
11x14 to 16x24	15 50	14 00	13 00	13 00
18x22 to 20x30	19 50	17 75	16 25	.....
15x36 to 24x30	20 75	19 00	17 00	.....
26x28 to 24x36	22 00	20 25	18 25	.....
26x36 to 26x44	23 00	21 25	19 00	.....
26x46 to 30x50	25 00	23 00	20 50	.....
30x52 to 30x54	25 50	24 50	22 00	.....
30x56 to 34x56	28 50	26 25	23 50	.....
34x58 to 34x60	31 50	29 00	26 00	.....
36x60 to 40x60	34 50	31 75	28 50	.....

Discounts—70 & 10 for S. and 70 10 & 5 for D

Drugs.

Opium.

Opium, in bond	₩ lb	2 80 @	3 00
duty paid (cases)		3 80 @	4 00
as wanted		3 90 @	4 00
powdered		5 40 @	5 50
Morphine		2 85 @	3 25
Foreign		2 75 @	3 00

Quinine.

Quinine, American	₩ oz.	49 @	56
English		— @—	
French		— @—	
German		44 @	49
Cinchonidia, American		5 @	5¼
Foreign		4½@	5¼
Quinidia German		16 @	30

Miscellaneous.

Acid benzoic, German	₩ lb	12½@	55
English	₩ oz	12½@	13
boracic purified	₩ lb	23 @	25
refined		17½@	18
flaky		17 @	17½
Carbolic, pure crystals		32½@	45
commercial		30 @	32
Citric, Domestic		53 @	54
Foreign		53 @	54
Salicylic, bulk & boxes		1 62½@	1 72½
Alcohol, 94 p ct, in bond	₩ gal	— @	—
Free		2 00 @	2 02
Refi'd wood, 95 p ct		— @	1 25
92 p ct		— @	1 20
Dia Methyl, 98 p ct		1 35 @	1 50
Inodorine, 97-99 p ct		1 60 @	1 70
Cologne spirits, 188 p t		2 10 @	2 12
Ambergris Gray		32 00 @	30 00
Black		9 00 @	12 00
Ammonia Carb. Foreign		7¾@	8
Domestic		8½@	8¾
Bay rum imp. bulk		1 95 @	2 00
Barbadoes Tar		38 @	40
Borax, Refined City, bbls	₩ lb	8 @	8¾
Cal., bbls		7½@	7¾
Concentrated		7 @	7¾
Powdered		7½@	8
Bromine		86 @	87
Burgundy Pitch		2½@	2¾
Cantharides, Russian		1 60 @	1 70
Chinese		60 @	65
Calomel, Domestic		78 @	81
English		1 00 @	1 10
Castile Soap, White		10½@	11¼
Mottled ordinary		4½@	5½
pure		½@	6
Chian Turpentine	₩ oz	45 @	—
Chloroform		— @	56
Colocynth Apples, Trieste	₩ lb	40 @	
pressed		— @	—
Spanish		21 @	22
Cacao Butter		45 @	46
Chloral Hydrate, crystals		1 55 @	
plates		1 3 @	
Corrosive Sublimate		71 @	73
Cuttlefish Bone, Trieste		17½@	
Dragon's blood mass		20 @	22
" " reed		42 @	45
Ergot, Spanish		55 @	60
German		45 @	50
Gelatine, English		50 @	60
French		82 @	
American		55 @	—
Glucose		3 @	3
Grape Sugar		3 @	3¼
Glycerine, German, dms		21 @	22
H L & Co, bbls & cs		24 @	26
W J M G, bbls & cs		21½@	22
A. G. Co. C. P., bbls & cs		24 @	26
do do No 1, pure white		19½@	24
M W & co. C P Bbls & cans		20½@	22½
" " P W Bbls & cs		19½@	21½
C G Co., bbls & cs		21 @	22
M & R Bbls & cs		20½@	23½
Glycerine, crude		15 @	18
Guarana, Whole		1 25 @	1 30
Powdered		1 35 @	1 40
Iceland Moss		4½@	5
Indian Hemp, (Canabis In)		10 @	12
Insect Powder		45 @	55
B. W. B		— @	—
Irish Moss		5 @	10
Isinglass, Russian		3 75 @	4 00
American ordinary		75 @	
prime		90 @	1 05
Iodine, re-sublimed		3 50 @	3 55
Licorice Corigliana		29 @	30
Guzzolini		26 @	—
Guis Grasso		24 @	26
"P. & S."		28 @	29
Domestic		20 @	
Paste		13 @	
Lupulin, American	₩ lb	70 @	
German		50 @	
Lycopodium, prime		39 @	41
Manna, Large Flake		75 @	80
Small Flake		45 @	47
Sorts		40 @	42½
Menthol		2 00 @	2 50
Musk, True Grain	₩ oz	14 00 @	55 00
Tonquin Pods		8 50 @	26 00
Canton Grains		20 @	1 00
Nitrate Barium	₩ lb	8½@	9¼
Strontia		10½@	11
Nux Vomica, pockets	₩ lb	3 @	
Oil, Almond, Sweet		20 @	27
Myrbane, American		17½@	18
English		19 @	32
German		— @	—
Sesame	₩ bbl	66 @	75
Castor City, bbls & cases		14 @	15
Cod Liver Norwegian	₩ bbl	27 00 @	30 00
Newf	₩ gal	70 @	

Phosphorus	℔	70	@ 75
Precip. Red		88	@ 91
White		93	@ 95
Precipitated Chalk, Eng. bk		5	@ 6
bdls		7	@ 7
Potassium, Bromide, bulk		36	@ 37
glass		44	@ 45
Iodide, bulk		2 70	@ 2 75
glass		2 78	@ 2 85
Quicksilver		62½	@ 65
Sago, Pearl		3	@ 3½
Flour		3½	@ 3¾
Sugar of Milk, Cob		18	@ 20
Powdered		19	@ 21
Sulphur, Roll			@ 1¾
Flour			@ 2
Santonine			@ 3 75
Tamarinds	℔ kg	1 50	@ 1 75
	bbls	—	@ 3
Venice Turpentine	℔	20	@ 24
Wax, Brown Southern		26	@ 27
State		25	@ 28
Brazil		12	@ 16
White, pure		40	@ 45
Japan		11½	@ 12
Carnauba		11	@ 16
Ceresin		13	@ 14

Balsams

Copaiba, Angostura	℔	60	@—
Para		62½	@65
Central American		—	@50
Fir, Canada	℔ gal	2 75	@2 85
Oregon		1 15	@1 20
Peru	℔	1 12½	@1 15
Tolu		52	@ 54

Barks

Angostura	℔	—	@ —
Bayberry		7	@ 8
Buckthorn		4	@ 5
Cascarilla		6½	@ 8½
Canella		12	@ 12¾
Cinchona, Red		20	@1 45
Yellow		12	@1 25
Coto		—	@ 75½
Elm, common		9	@ 10
selected		12	@ 14
Loxa		30	@ 32
Oak, White		3½	@ 4
Red		3½	@ 4
Orange Peel, West Indian		4	@ 6
Malaga, prime		7	@ 10
Curacoa		7½	@ 15
Prickly Ash		12	@ 15
Pomegranate (of root)		15½	@ 17
Quebracho		15	@ 20
Sassafras		6	@ 6½
Simaruba		30	@ 40
Soap, Whole		5½	@ 6
Crushed		6½	@ 6¾

Beans.

Vanilla, Mexican	℔	6 00	@14 00
Bourbon		4 00	@ 8 00
Tonka Angostura		1 35	@ 1 40
Surinams		65	@ 70
Para		35	@ 50
Calabar		35	@ 50
St. Ignatius		50	@ 55

Berries.

Cubeb	℔	1 50	@ 2 00
Juniper		6	@ 6½
Fish (Cocculus Ind)		4	@ 4½
Laurel		5	@ —
Prickly Ash		20	@ —

Essential Oils.

Anise	℔	1 75	@ 1 80
Almond (bitter)		2 50	@ 6 75
Bay, ℔ bottle of 22 ozs		5 00	@ 6 50
Bay Oil, per lb		3 62½	@ 4 73
Bergamot		2 60	@ 3 00
Black Pepper		65	@ 5 50
Calcput		65	@ 70
Camphor		9½	@ 12
Caraway, Seed		1 25	@ 1 80
Chaff		50	@ 63½
Cassia		80	@ 82½
Citronella		32	@ 34
Clove		1 65	@ 1 75
Copaiba		70	@ 75
Croton		95	@ 1 00
Cubebs		13 50	@14 00
Cumin, American		5 50	@ 5 50
Fennel		85	@ —
Seed		1 50	@ —
Geranium, Turkish		3 00	@ 3 50
Rose, French		7 75	@12 00
Gingergrass		2 25	@ —
Juniper, once rect		—	@ 1 00
Twice rect		1 50	@ 2 00
Wood		27	@ 37
Lavender, Garden		50	@ 75
Flowers		1 75	@ 1 85
Flowers, Charras		1 60	@ 1 90
		1 50	@ 1 87½
Lemon		65	@ 79
Lemongrass		45 00	@ —
Neroli, Bigarade		27 50	@ —
Portugal		50 00	@ —
Petale		2 25	@ 2 50
Nutmeg			
Orange, Sweet		1 15	@ 1 75
Bitter		1 65	@ 4 00
Origanum		18	@ 25
Charras		20	@ 44
Peppermint, tin cans		2 00	@ 2 15
cases		2 50	@ 2 60
A. M. T. crystal white		2 50	@3 00
Pennyroyal		75	@ 80
Rose,		4 75	@ 4 80
Ibmsen's	℔ oz	5 00	@ 5 25
Holstein's		4 85	@ 5 00
Rosemary, Trieste	℔	50	@ —
French		—	@ 35
Flowers		70	@ 1 10
Flowers, Charras		80	@ 1 10
Sandalwood		2 25	@10 50
Sassafras		46	@ 48
Spearmint		2 60	@ 3 25
Tansy		2 25	@ 2 50
Thyme, Red		21	@ 82½
White		80	@ 1 10
Wintergreen		1 80	@ 1 85
Wormseed		1 50	@ —
Wormwood		4 50	@ 5 00

Flowers.

Arnica	℔		@
Chamomile, German		17	@ 25
Roman (new)		31	@ 5
Insect		47½	@ 52½
Lavender		4½	@
Rosemary		15	@ 20
Saffron, American		28	@ 30
Alicante		8 00	@ 8 50
Valencia		14 00	@14 50

Gums.

Aloes, Cape	℔	5½	@ 7
Barbadoes		19	@ 25
Curacoa		5	@ 5½
Socotrine		40	@ 52
Arabic, 1st picked		93½	@ 95
2d picked		83½	@ 85
3d picked		72½	@ 75
4th picked		62½	@ 65
5th picked		52½	@ 55
6th picked		34	@ 35
Sorts		50	@ 70
Siftings		33	@ 40
Senegal		35	@ 48
Asafœtida		8½	@ 9
Benzoin		30	@ 45
Camphor, refined, in bbls		25	@ 26
in cases		26	@ 7
Chicle		30	@ 32
Euphorbium		15	@ 17
Gamboge, pipe and block		65	@ 77½
Gedda, Siftings		—	@ —
Sorts		—	@ 23½
Guaiac		18	@ 25
Kino		11	@ 12
Mastic		90	@ 1 00
Myrrh,		22	@ 35
Olibanum, Tears		16	@ 10
Sorts		6½	@ 7½
Sandrac		24	@ 28
Scammony, Aleppo		25	@ 3 75
Virgin		7 50	@ —
Tragacanth, Aleppo, 1st flake		47	@ 49
2d flake		42	@ 44
3d flake		—	@ 40
Turkey, 1st flake		75	@ 80
2d flake		57½	@ 60
3d flake		45	@ 47½

Herbs and Leaves.

Aconite	℔	9	@ 11
Althea		8	@ 10
Belladonna		14	@ 1
Buchu, Short		7	@ 9
Long		20	@ 25
Coca		24	@ 32
Damiana		25	@ 28
Digitalis		6	@ 9
Eucalyptus		4	@ 5½
Grindelia Robusta		12	@ 14
Henbane, (Hyosciamus)		12	@ 14
Horehound		6	@ 8
Jaborandi		25	@ 27
Laurel		3½	@ 4
Lobelia		4	@ 7
Matico		20	@ 22
Marjoram, German		14	@ 20
French		9	@ 11
Prince's Pine		—	@ 8
Rose, Red		85	@1 25
Pale		35	@ 40
Rosemary		3	@ 4
Sage, Italian		2	@ 3½
Senna, Alex. Nat		33	@ 33½
Siftings		30	@ 35
Garbled and sifted		37½	@ 50
Tinnivelly		12	@ 25
Thyme		4½	@ 10
Uva Ursi		4	@ 4½
Yerba Santa		12	@ 14

Roots.

Aconite	℔	10	@ 12
Alkanet		8	@ 10
Althea, Whole		12	@ 12½
Cut		16	@ —
Angelica, German		10	@ 12
American		9	@ 10
Arrowroot, Bermuda		31	@ 35
St. Vincent, bbls &cans		9	@ 11
Jamaica		10	@ 11
Arnica		—	@ 12½
Belladonna		13	@ 14
Blood		10	@ 2
Burdock		7½	@ 9
Calamus, Bleached		—	@ 40
Unble'd, split & peeled		7	@ 1
Canada Snake select		34	@ 38
Colchicum		—	@ 10
Colombo		8	@ 11
Culvers		15	@ 16
Dandelion, German		10	@ 12
American cut		11	@ 12
Elecampane		6	@ 8
Galangal		4	@ 4½
Gentian		4½	@ 4½
Ginseng		1 75	@ 1 85
Ginger, Jamaica, Unbleached		12½	@ 13
American, Bleached		15	@ 15½
London Bleached		14½	@ 15
Golden Seal		34	@ 37
Hellebore, White, powdered		—	@ 9½
Whole		5	@ 7
Ipecac, Rio		1 30	@ 1 40
Jalap		11	@ 13
Kava Kava		28	@ 30
Lady Slipper		12	@ 15
Lovage, American		40	@ 50
German		9	@ 20
Licorice, ordinary		5	@ 7
selected, in bdls		12½	@ 20
Mandrake		—	@ 5
Orris, Florentine		11	@ 15
Finger		45	@ 80
Verona		6	@ 7
Pareira Brava		25	@ —
Pellitory		16	@ 18
Pink		42	@ 45
Rhatany		5	@ 8
Rhubarb, Whole		17½	@ 60
Cut		60	@ 50
Sarsaparilla, Honduras		22	@ 30
Mexican		6½	@ 7
American		6	@
Senega Southern		48	@
Western		46	@
Serpentaria, Texas		17	@
Stillingia		5	@ 10
Squills, ordinary		—	@ 9
white, prime		8	@ 9
Valerian German		10	@ 11
Belgian		8	@ 10
English		—	@ 17
Vermont		10	@ 11
Yellow Dock		7	@ 9

Seeds.

Anise, Italian	℔	9	@ 12
German		—	@ —
Star		19	@ 20
Canary, Sicily		3½	@ 3¾
Smyrna		2½	@ 2⅝
Spanish		3¾	@ 4
Caraway, Dutch		7	@ 7¼
German		—	@ —
Cardamom, Alleppy		45	@ 80
Malabar		65	@ 85
Mangalore		60	@1 50
Celery		8¾	@ 9¼
Colchicum		20	@ 25
Clover		9	@ 11
Coriander, English		4	@ 5
French		—	@ —
German		5	@ 5¼
Cummin		12	@ 13
Fennel, German		7¾	@ 8½
Fenugreek		2½	@ 2¾
Guinea Grains		5	@ 6
Hemp, Russian		2¾	@ 3
Smyrna		—	@ —
Lobelia		25	@ 30
Millet, Domestic	℔ bush	1 10	@ —
Foreign	℔	1¾	@ —
Mustard, California yellow		4½	@ 4¾
Dutch		5¾	@ 6
English		5½	@ 6
Trieste brown		7	@ 8
Poppy		8½	@ 9
Quince, German		55	@ 60
Russian		28	@ 30
Rape, Domestic		2¾	@ 3
English		4	@ 3¾
German		3½	@ 3¾
Timothy		2½	@ 2½

Shellac

D. C	℔	25	@ —
Octagon B		19	@ —
V. S. O		19	@ —
Diamond I		16½	@ 17
S. S		16	@ 17
Garnet, A. C		12	@ 12½
T N Quality		14	@ —
Button		16	@ —
Bleached		30	@ 31

Spices.

Cassia, Batavia	℔	7	@ 7½
China		5½	@ 5½
Saigon, rolls		34	@36
broken		28	@30
chips		7	@10
Buds		10¼	@10½
Cloves, Prime, Zanzibar		23	@—
Amboyna		26	@27
Stems		4½	@ 5
Ginger, African		4¾	@ 5
Calcutta		3½	@ 3½
Cochin		7	@11
Mace, Batavia		63	@65
Banda		65	@68
Penang		65	@68
Nutmegs, 110s		56	@57
Pepper, Singapore		16	@—
West Coast		15	@—
Acheen, prime		14½	@15
Penang, white		23	@22½
Singapore, white		—	@27
Red, Zanzibar		7½	@ 8
Bombay		—	@ 5½
Pimento, Prime		—	@ 5½

Sponges.

Glove	℔		25@60
Slate			45@85
Carriage, Yellow			45@60
Velvet			65@80
Cuba S. W		1 80	@ 2 40
Nassau, S. W		1 65	@—
Florida, S. W. Natural		2 75	@ 3 50
Reef, No. 2		80	@ 1 00
No. 1		1 15	@ 1 25
Coupee, Bathing		1 40	@ 1 80
Small "		1 00	@ 2 00
Formeo "		2 50	@ 5 00
Zimoca, Small		1 15	@ 3 00
and Medium		2 00	@ 2 25
Potters		2 75	@ 3 25
Toilet Potters		3 75	@ 5 00
Shoe Sp		2 75	@ 6 50
Duree Shoe Sp		2 25	@ 3 75
Cup, each ℔ piece		25	@ 4 00
Surchoise, Bath, on Strings		4 00	@24 00
Cavalier, on Strings		2 00	@ 3 50
French & Eng. Chamois	℔ kip.	1 00	@30 00

Chemicals.

Heavy Chemicals.

Alkali, 36 ℔ cent		1 10	@1 15
Refined, high test		1 15	@1 25
Bleach, over 35 ℔ cent		1 87½	@2
Salt cake		50	@ 60
Soda ash, Carb, 48 ℔ cent		1 21½	@1 25
High test		1 18¾	@1 20
Caustic, 48 ℔ cent		1 21¾	@1 35
High test		1 12½	@1 15
Newcastle, 48 ℔ cent		1 21¾	@1 30
High test		1 15	@1 17½
Bicarb, English		3 10	@3 35
American		3 00	@3 50
Carbonate		1 75	@1 80
Caustic, 60 ℔ cent		2 62½	@2 55
70 ℔ cent		2 25	@2 30
74 ℔ cent		2 25	@2 30
76 ℔ cent		2 37½	@2 45
Sc., English		90	@1 05
American		1 00	@1 20

Acids.

Acid, Acetic		2¾	@ 2¾
Chemically pure		16	@ 17
Pure		5½	@ 5½
Oxalic		8	@ 8½
Sulphuric, 60 deg		90	@ 95
66 deg		95	@1 20
Muriatic, 18 deg		1 15	@1 .
20 deg		1 30	@1 50
22 deg		1 40	@1 80
Nitric, 36 deg		4	@ 5½
38 deg		4½	@ 6
40 deg		5	@ 6½
42 deg		5½	@ 7
Tartaric, Crystals		43	@ 44
Powdered		44	@ 45

Ammonias, Potashes and Fertilizing Chemicals.

Ashes, Pot, 1st sorts	℔	4	@ 4¼
Pearl		5	@ 5¾
Potash, Chlorate, English		15	@ 15½
Powdered		15	@ 15½
Carb		4 70	@ 5½
Caustic		7½	@ 8
Cyanide		—	@ 40
Sulphate of Potash		1 07½	@1 10
Aqua Ammonia (in obya) 16 deg.	℔	2¾	@ 3¾
18 deg			@ 4¾
20 deg			@ 6
22 deg		6	@ 7
26 deg		10	@ 11
Ammonia, Muriate		6½	@ 8
Sal		8	@ 8¾
Sulphate		3 05	@ 3 10
AMMONIATES, ETC:			
Azotine, per unit		2 00	@ 2 05
Blood, Dried, Red, ℔ unit		1 95	@ 2 00
Black, ℔ unit		1 95	@ 2 00
Bones, Rough, ℔ ton		16 00	@20 00
Ground, ℔ ton		20 00	@25 00
Bone Black, refuse, ℔ ton		17 50	@18 00
Kieserite		5 50	@ 5 75
Menhaden Guano		23 50	@24 00
Grand Caymans Phosphate Guano, per unit		—	@ —
Phosphate Rock, f. o. b. Charleston		5 75	@ 6 00
Phosphate Rock, f. o. b. New York		6 00	@ 6 50
Phosphate Rock, ground		10 00	@10 50
Acid Phosphate		12 00	@15 00
Potash Muriate	℔ 100 lbs.	1 72½	@ 1 80
Kainit	℔ ton	8 00	@ 8 50

Miscellaneous.

Acetate of Lime, American, Gray		2 40	@ 2 45
American, Brown		1 75	@ 1 80
Alum, Lump		1¾	@ 1¾
Ground		1¾	@ 2
Cake		1¾	@ 1¾
Argols, Crude Oporto		—	@ —
Plate		23	@ 24
Half Refined		28	@ 32
Arsenic, White		2½	@ 2½
Red		6½	@ 6¾
Brimstone, Crude, best 3ds		21 00	@ 25 00
best 3ds		19 00	@ 23 00
Copperas, Ordinary		60	@ 75
Best grades		1 20	@ 1 30
Powdered		1¾	@ 1¾
Cream Tartar, French, in bond		—	@ —
American, 99 p. c.		33½	@ 34
Powdered, 99 p. c.		34	@ 35
Glauber Salts		75	@ 80
Epsom Salts		1 15	@1 20
Nitrate of Lead		9	@ 10
Soda		2 10	@2 12½
Rochelle Salts		30½	@ 31½
Sugar Lead, Brown		7½	@ 8
White		13	@ 13½
Liquor, White			@ —
Saltpeter, Crude		5	@ 5½
Refined		6	@ 8
Vitriol, Blue Ordinary		4½	@ 5
Extra		5½	@ 5½

Philadelphia Chemical Prices

Soda Ash Carb, 48 per cent		1 25	@ 1 40
58 per cent		1 25	@ 1 35
Newcastle, 48 per cent		1 22½	@ 1 30
Caustic, 48 per cent		1 25	@ 1 40
Caustic, 60 per cent		2 55	@ 2 70
70 per cent		2 40	@ 2 60
74–75 per cent		2 37½	@ 2 50
76 per cent		2 37½	@ 2 90
Bicarb		3 15	@ 3 50
Crystals		93½	@ 1 10
Refined alkali, 36 per cent		1 15	@ 1 25
48 per cent		1 22½	@ 1 35
Pure alkali, 58 per cent		1 20	@ 1 30
Bleaching powder		2 00	@ 2 25
Nitrate soda		2 00	@ 2 40
Potash chlorate		15½	@ 16
Muriate		1 75	@ 1 90
Carb		5	@ 5½
Caustic		7½	@ 9
Brimstone		20 75	@ 25 00

Dyestuffs.

Acid Picric best crystal	℔	50	@ 55
Albumen prime egg		60	@ 65
imported blood		15½	@ 16
domestic blood		—	@ 15½
No. 1½ blood		14½	@ 15½
Alizarine ass't		10	@ 20
Annatto		12	@ 25
seed		10	@ 16
Archil Weed		7	@ 15
Aurine		58	@
Barbary Rout, cut		4	@
Bichromate of Potash, Scotch		10½	@ 11
American		10½	@
Bichromate of soda		8½	@
Carmine of Indigo		40	@
Cochineal, Teneriffe Silver		30	@ 33
Black		30	@ 33
Gray black		35	@ 37
Mexican		—	@ 35
Ammoniac		—	@ 37
Cudbear, French		12	@ —
Concentrated		25	@ 18
English		12	@ 30
Cutch slab		7½	@ 7¾
bag		7½	@ 7¾
Dextrine		4½	@ 4¾
Divi Divi	℔ ton	60 00	@ 70 00
Fuller's Earth, lump	℔ lb	90	@ 95
powdered		1¾	@ 2
Flavine		21	@ 22
Fustic stick	℔ ton	20 00	@ 28 00
Gambier	℔ lb	5½	@ 5¾
Garancine		6½	@ 9
Indigo, Bengal, low grade		95	@ 1 00
medium		1 10	@ 1 25
high grade		1 25	@ 1 40
Caracas		—	@ —
Kurpahs		75	@ 1 05
Guatemala		78½	@ 80
Manila		70	@ 75
Madras		65	@ 85
Indigotine		3 00	@ 4 00
Lac Dye		9	@ 15
Logwood stick	℔ ton	25 00	@ 35 00
Madder, Dutch	℔ lb	7½	@ 8
French		5	@ 7
Myrabolans		2	@ 2¾
Muriate of Tin		10	@ 15
Nitrate of Iron, commercial		2	@ 3
true		5	@ 6
Nutgalls, Blue Aleppo		14½	@ 15½
Chinese		—	@ 17
Oxymuriate of Antimony		4	@ 6
Persian Berries		21	@ 26
Prussiate of Potash, Am. Yellow		—	@ 19
Red		42	@ 45
Scotch, Yel.		19½	@ 20
Red		43	@ 45
Prussiate of soda		17½	@ 18
Phosphate of soda		7	@ 8
Safflower		—	@ —
Sago Flour		3½	@ 3¾
Salts of Tartar		6½	@ 7
Soluble oil		—	@ 6
Sumac, Sicily prime	℔ ton	68 00	@ 72 00
Virginia		45 00	@ 53 00
Starch, Corn	℔ lb	2½	@ 2¾
Potato		4½	@ 4¾
Wheat		5¾	@ 6
Stannate of Soda, 50% soluble			@ 15
40% soluble		—	@ 13
25% soluble		—	@ 9
20% soluble		—	@ 8
Tin Crystals		26	@ 28
Turmeric root Alleppy		3½	@ 3¾
Bengal		—	@ —
Corringa		3	@ 3½
powdered		5½	@ 6
Ultramarine, imported		20	@ 30
American		5	@ 15
Vanadiate, Ammonium		2 75	@ 3 25
Woad, English		9	@ 10

Coal Tar Colors:

Alizarine		19	@ 20
Aniline Oil		20	@ 25
Salt, crystals		16	@ 18
cake		20	@ 21
Bismarck brown		80	@ 1 20
Eosine		2 40	@ 3 00
Fast red		50	@ 65
Fast yellow—acid		75	@ 1 50
Fuchsine crystals		1 25	@ 1 75
Hoffmann's violet—3B		1 75	@ 2 50
Methylene blues		4 50	@ 6 75
Methyl violets—2R		1 50	@ 2 00
2B		1 50	@ 2 00
B		1 50	@ 2 00
Nicholson (alkali) blue—3B		2 25	@ 3 00
5B		3 75	@ 4 00
Red shade		2 00	@ 2 25
Nigrosine		1 25	@ 2 00
Orange A—II		40	@ 65
Safranine		1 75	@ 2 25
Scarlet R		45	@ 55
RR		50	@ 65
RRR		70	@ 75
Soluble blue—Green shade		2 00	@ 2 50

These prices are for colors of standard purity in original packages. Reduced colors can be obtained at irregular and very much reduced figures.

Chipped Dyewoods, Etc

Barwood	℔	1¼	@ 2¼
Camwood		4½	@ 6
Fustic, com		1½	@ 1¾
Cuban		1½	@ 1¾
Green Ebony		3½	@ 4
Hypernic		3½	@ 4¼
Logwood Campeachy		1¾	@ 2¼
Laguna		2	@ 2½
Nicwood		2	@ 3
Peachwood		3½	@ 3¾
Quercitron		1½	@
Redwood		2	@ 3
Red Sanders		—	@ 3

Extracts:

Archil	℔ lb		@3½
Concentrated		21	@ —
Black Oak		3½	@2¾
Barberry, French		26	@ 30
Chestnut		5½	@ —
Chestnut Oak		3½	@ —
Refi'd Sedementless Hemlock		4½	@ 6
Prime Hemlock		3½	@ 4+
Fustic, solid		10½	@ —
liquid, 51 deg		8	@ —
Indigo Extract		7½	@
Logwood, solid		3½	@
liquid, 51 deg		2½	@
42 deg		2½	@ 2½
Madder		8½	@ 7¼
Persian Berries, French		20	@

new Karahissar; this did not, however, influence prices of druggists' kinds here, and no progress could be made. Soft shipping kinds, except fine Salonica and Baloukissar, were all offered at lower prices, for what reason it was difficult to understand, as the crop of these descriptions was known to be unusually small. Forced sales, however, were made of fair and medium Tokat and Malatia at 14@16s, these prices being considerably below nominal values. Shortly afterwards the Smyrna and Constantinople markets became flat with a downward tendency, holders of old crop soft shipping kinds became most anxious to sell; good Baloukissar was disposed of at 15s, fine Tokat, Malatia and Salonica at 17s; Karahissar was also pressed for sale, and transactions took place at 14s 9d@15s. Manufacturing qualities were in demand for export and some quantity of good old unsightly Salonica was taken at 14@15s, and Yoghourma at 12s, at this time inferior to fine Tokat and Malatia realized 13@17s. From the beginning of November till the end of the year great depression prevailed, and during the former month very little was done. Fine Salonica sold in retail quantities at 19s down to 18s, and some few cases of old Tokat at somewhat reduced rates. For good Smyrna seconds 13s was obtained, but early in December 12s 6d was accepted (a forced sale) for fair Smyrna; at this time a better export demand was experienced for old Tokat, and some quantity of fair to good was sold at 12s 6d@14s 6d. and for a few cases 16s was obtained. Forced sales of good and fine 1886 Salonica and Baloukissar took place at considerably under nominal values. After this the business was limited to a few cases of fine Smyrna, which realized 15s: the closing quotations being, good and fine new Malatia 17@18s, fine Salonica 18s@19s 6d, Baloukiesar 16s 6d. fine old Malatia and Tokat 17s, Salonica, 17s, Baloukissar 16s, Karahissar 15s, Beybazaar 15s.

The crop of 1887 is estimated at about 2,000 packages, against about 7,500 in 1883.

Persian—The first transactions of the year consisted of sales on the spot at 11s@13s 6d, and of fine for arrival at 12s@12s 3d, at the same time considerable quantities were shipped hence to China. Early in February holders of dark opium were anxious to realize old stocks, and large transactions took place at 10s 6d@13s 6d for good dark to fine pale; business was also done for arrival at 12s@13s, the market being very firm, both for spot and also for arrival. At the close of this month another large business was done at 10s 6d@13s for spot parcels, and at 11s for arrival. A large business was done in March, commencing with good and fine on the spot at 13s@13s 6d; afterwards a few cases of dark paste were sold at 12s 6d, being a considerable advance from the lowest point, pale realized 13s 6d, and during the fourth week some quantity was taken on speculation for Turkish account, the transactions being at 13s 3d@14s; at the same time large quantities of dark paste were taken for export, and sales for arrival were effected at 14s. Importers now asked 14s 6d, which was afterwards paid, but only for small quantities, the market during April and the greater part of May being very quiet. At the close of the latter month dark past sold at 12s 6d@13s, and pale in large quantities at 14s@14s 6d, many parcels being withdrawn from the market, holders being very firm. Small sales of fine were shortly afterwards made at 15s, and some quantity of dark was disposed of at 13s 6d. July was a very quiet month, only a few cases of fine being disposed of at 15s, and a case or two of dark at 14s. August was also a quiet month, very little being done. The tendency being downwards, towards the end of the month a parcel of good quality was disposed of at 13s. In September very little was done; a few cases of "sticks" of low analysis were sold at 11s 6d, and later small quantities of similar make, of better quality realized 14s, fine balls being taken at 14s 6d and dark at 13s. Considerable quantities were shipped to China, the Hong Kong market having become very short of stock. There was a moderate business in October, chiefly in fine, at 14s to 14s 6d, and for a few cases 15s was paid, 13s being accepted for dark paste. During November the market was very quiet, and prices remained unchanged. The shipments to China were of considerable extent, but they did not impart any extra strength to this market. Early in December there being a further rise in the China market, considerable purchases were made here, prices, however, showing no change. Towards the close of the month further large shipments were made, the market here being dull at 14s to 14s 6d for fine pale. Last year and during this spring a large business was done for forward delivery; this autumn there has been a total absence of demand for arrival. The new crop, which is an unusually small one, is for the most part of good and fine quality; of really dark paste scarcely any has been sent forward, and as consumers in all parts of the world are now very particular as to color, it is useless to send dark opium to this market unless with the view of selling to manufacturers at low prices. The export demand from July to September was very languid; this was mainly caused by the lowness of prices in Hong Kong, where most of the consuming markets supplied their wants; the present firmness of prices in China will, no doubt, shortly cause a better demand here from other quarters. Persian in leaf is now scarcely ever asked for, and is in consequence difficult of sale; parcels wrapped in white paper are also objected to, at present red and pink paper are the colors most liked. Opium having a rough surface when split is also not liked, many buyers refusing any but quite smooth close paste.

The crop this year is estimated at about 2,000 cases, against 4,000 in 1886.

REMARKS ON THE CROP OF 1887.

The crop has turned out smaller than any since 1880, and the arrivals have, in consequence, been on a very small scale, several kinds have as yet not been received, and of others only two or three cases have come to hand.

Malatia—Supplies have been very small, and until lately by no means of fine quality, besides which the leaf has been very dull, and many of the pieces are cone shaped, which is not liked, as they are difficult to repack for export, and readily becomes dry. From Alexandretta only small quantities have been received, most of it has, however, been of fair quality; a few cases good and fine, but none so inferior as in former years—unless fine it is not liked, and is always difficult of sale.

Tokat has at present been scarcely represented, a few cases we have seen have been of extra fine quality, and very sightly, but the recent arrivals are more mixed; this opium is now freely taken with Malatia, their characteristics being very similiar.

Salonica—This opium has been received in greater quantities than any other "soft shipping kind," a fair proportion has been of good and fine quality, but many parcels have been very mixed, and in consequence difficult of sale. Stocks of old crops are now very much reduced, large quantities having been taken for manufacturing purposes.

Baloukissar, Bogaditz and Angora—Only a few cases of the former have reached us, the quality of which has been very satisfactory. of Bogaditz and Angora not has yet come to hand,

Karahissar, Yerli and Beybazaar—Up to the present none has come forward, and we understand of the two latter kinds supplies are very small.

Gheve—The arrivals have been limited to a few cases, which having come to hand at a time when there was a fair enquiry, good prices were realized.

Egyption—Supplies have been moderate, and there having been more demand, sales have been effected without any great delay—if this opium was sent forwaad in more sightly pieces and all soft, it would soon come into favor.

TRADE REPORTS.

Liverpool.

Under date of Dec. 31, 1887, Messrs. Joseph P. Brunner & Co. say:

There has been little animation in our market this week owing to the holidays, but at the close there is an improved inquiry for soda ash.

Soda ash firmly held and in some cases a slight advance is demanded. For prompt delivery sales are reported for America of 100 tons 48 per cent caustic ash and 150 tons 48 per cent carb ash, both at 1d. We quote: Caustic ash 48 per cent 15-16@1d, high test 15-16@1d, carb ash 48 per cent 1@1 1-32d, high test 31-32@1d.

Soda crystals quiet at £3 11s 3d@2 12s 6d, and the higher figure is reported to have been paid by American buyers. For forward delivery a slight reduction on spot quotations would be accepted.

Caustic soda is without improvement and following are range of values: 60 per cent £6@6 5s, 70 per cent £7@7 5s, 74 per cent £7 11s 3d@7 12s 6d, 76 per cent £8 5s@8 15s. For forward deliver the higher figures are asked.

Bleaching powder is in poor request and £7 15s@7 17s 6d are nominal values, but no business reported.

Chlorate of potash dull at 6½d for prompt and 6½@6¾d for forward delivery.

Bicarbonate of soda steady at £5 2s 6d@5 10s, according to quantity.

London.

Under date of Dec. 31, 1887, Messrs. F. W. Bowyer & Bartleet say:

Galls, Busreh—The market has become very quiet, and no transactions have taken place either in blues or greens. Whites have been dealt in at 50s, at which price more are offering. Smyrna—Nothing doing, and difficult of sale. Stocks small, and off the market. Morea—Demand limited. Stock exhausted.

Gum Arabic, Trieste—Supply very short, but demand limited. Senari—Supply small, but the sale is very slow. Egyptian—Market bare of stock. Sorts—Market quiet, and no transactions have taken place. Supplies very short. Ghezirah has again been dealt in at 92s 6d, at this price more could be obtained, but some holders ask 95s. The available supply is now very small. In Amrad nothing has been done, a further parcel of about 160 bales has come to hand.

Gum Tragacanth, Baghdad—The market remains very steady, but business has been confined to the lower qualities, which have been taken to a small extent at £5 15s@6 15s. Seconds continue neglected. Independent of the arrivals of this season, parcels of second quality in speculators' hands of old imports are heavy, so that the stock of this quality is large. Hog—Baghdad without demand. Supplies are considerable for present wants. Syrian descriptions very dull of sale; retail business in good quality at 39s. Smyrna—The supply of firsts and seconds is small, but demand very limited. The lower grades are inquired for; some arrivals have come to hand, including some good seconds.

Gum Mastic—Some quantity offering, but the demand is very restricted.

Opium—There is no change whatever in this market, only retail sales having been made; there has been some inquiry for manufacturing qualities, but at present no business has resulted. Persian is unchanged.

Otto Roses—Most difficult of sale.

Senna—Demand has fallen off, and there is no business to report. Supplies considerable.

Scammony—Market inactive. Stock of fine exhausted. The lower qualities of Syrian are plentiful, and almost entirely neglected. Skilleep very slow of sale. Roots—Very little inquiry. Stocks are rather heavy.

Hong Kong.

Under date of Dec. 10, 1887, Messrs. Russell & Co. say:

Kerosene Oil—The market remains pretty much as last advised, quiet, with buyers only for actual wants. Under the circumstances, holders have been unable to take advantage of the reported advance in the New York market, and continue to sell at the old quotation of $1 77½ per case for immediate clearance, at which figure about 10,000 cases have changed hands since last mail. The Mary L Cushing is now daily expected, and, pending her arrival, business is not likely to assume any importance.

Camphor—Formosa drug is nominally worth $18@18 50 per picul with no sales and no stock. In Japan drug, sales to the extent of about 600 piculs are reported at $22 50@23 per picul. The market closes firm, with no stock to speak of.

Star Aniseed—A few badly prepared parcels have been taken for export at $22 75@23 per picul. Good and properly worked seed cannot be had unless at a considerable advance on the above prices.

Star Aniseed Oil—Liberal supplies continue to come forward, and the total arrivals since the commencement of the season to date now amount to 790 piculs against 430 same period last year. Importers have sold about 40 piculs at $232@234 per picul, but the bulk of the stock is held by speculators, who are doing their utmost to uphold prices. We quote $234@235 as the asking price for about 275 piculs in stock.

Cassia Oil—Is quite neglected at the moment, the price asked being above the idea of buyers. We quote nominally $10@32 per picul, with about 260 piculs in stock and no inquiry whatever.

Cassia Lignea—In consequence of unusually large sales effected during the week, the price has advanced to $6 60 per picul in bales. Sales were 16,000 piculs in cases at from $6 15@6 50 including 4,000 piculs to arrive. Arrivals were 1,500 piculs and stock in 2,000 piculs.

Cassia Buds—Which a few days since had declined to $13 75 on account of large supply from the country have again advanced to $14 10, with sales of 100 piculs. Stock 900 piculs.

Gall Nuts—Quoted at $21 nominal. Sales nil. Stock nil.

Cantharides—Quoted at $50. Sales 10 piculs. Stock 10 piculs.

Under date of Dec. 5, 1887, Messrs. Arnhold, Karberg & Co. say:

Cassia—There is more demand and holders have advanced their rate 10-20 cents per picul.

Star Aniseed—There is somewhat more enquiry for shipment homeward.

Cassia Oil—Nearly 800 piculs have been brought to the market since beginning of the season, which is considerably more than last year, during the corresponding period. The demand has decidedly improved but buyers appear to be unwilling to grant the pretensions of holders.

Star Aniseed Oil—Available stocks are held by natives for quotations, which however, are entirely nominal, as there is no enquiry for export.

Gallnuts—Large transactions have taken place for forward delivery which may be computed at 2,000 cases. Stocks are nil and supplies coming in very slowly.

Japan Camphor—Supplies remain small, which allows of maintaining prices, despite the slack demand for Straits and India.

Saigon Cassia—No business is reported. Supplies aggregating 200 piculs reached the market and holders ask $45 per picul, rolls. Chips are out of stocks.

Vermilion—Quotation per box of 50 catties is $43 50.

Kerosene Oil—We have nothing of interest to report, the attitude of the market being unchanged. Quotation is $1 75@1 77½ per case, with very little inquiry on the part of consumers.

Antwerp.

Under date of Dec. 24, 1887, Messrs Jules Souheur & Co. say:

Petroleum—American refined opened firm and with an upward tendency but became more quiet afterwards and values became less steady. An upward movement has again become noticeable at the end of the week and prices close a full ⅛ franc higher than the above figures.

Naphtha is quoted at fr33 per 100 kilos.

Turpentine—American spirits have been firmer and business is confined to a few small parcels for consumptive needs at fl16. January is held at fl16¼ and first four months at fl17 with buyers a fraction below this figure. French spirits are equally firm at fl16¼ per 50 kilos but with very little business passing.

Rosin—Prices remain maintained without change. Good strained American is quoted at fr¾ per 100 kilos for spot and future delivery.

Calcutta.

Under date of Dec. 6, 1887, Messrs. C. C. Bancroft & Co. say:

Saltpeter is very firm; a large business has been transacted and an advance of about two annas established. The sales for the fortnight amount to about 650@700 tons of all kinds. Our stock is about 6,000@7,000 bags and contains very little desirable low refraction stuff.

Linseed has been in better demand, resulting in sales of about 2,000 tons for Europe and America. The market is firm at an advance of about two annas.

Turmeric is very steady with a good export and local inquiry. Our stock of all qualities is about 8,000 maunds.

Ginger—The market is very firm owing to reduced supplies; 800 bags have been taken for export at quotations.

Myrabollams—Market unchanged; 1,000 bags have been taken for shipment.

Nux Vomica—Nothing has been done.

Castor oil has been in steady demand and closes firm.

Shellac—The market ruled very quiet and rather easy till about five days ago, when a sudden demand from England sprung up, under the influence of which prices have advanced about Rs 5 0-0 for T N qualities. Sales were made on the 1st inst. at Rs 22-0 0 and yesterday at Rs 27-8-0, amounting altogether to 11,000@12,000 cases. The better marks have all been advanced in sympathy, but so far as we can hear without resulting in much business. Sellers are so excited and extravagant in their ideas that it is extremely difficult to quote the market correctly. There is still a large short interest uncovered which may cause a further advance.

Button lac has shared in the excitement, but we don't hear of any transactions at the advanced prices asked.

Cutch—The market is quiet and prices a little easier. We only hear of the sale of 1,000 bags at Rs 13-0-0. Supplies come forward moderately.

Indigo—Since our last report eight public sales have been held, at which 6,615 chests were offered and 6,255 were sold. For good grades of Bengals and Tirhoots the market is firmer and about Rs 5 0-0 higher; Oudes show no change in price but are firm; inferior and defective lots are not much inquired for. A good deal of business has been done privately both on the spot and to arrive, amounting to 600@650 chests. The quantity out of the market now amounts to 34,475 maunds against 22,000 maunds last year.

Singapore.

Under date of Nov. 28, 1887, Messrs. Paterson, Simons & Co. say:

Cloves—Last purchase was at $47.

Cubebs—Out of supply; last purchases were $108.

Cutch—Transhipped parcels are being exported but none offered on the market.

Dragon's Blood—No business reported recently.

Gambier has been rather firmly held and closes with no sellers at $6 85. About 270 tons have been purchased, say 20 tons (Sarawak) at $6 95, 75 tons at $6 90 and 175 tons at $6 86 to $6 85. Of No. 1 cubes about 100 tons have been taken at $10 07½@10 15, last price being $10 10.

Gambouge—Last purchases were at $70 for Siam.

Gum Dammar—Very scarce; last purchases of fine Palembang were at $26 50.

Gum Copal—About 50 tons of various qualities purchased this week at $6¾, $10½ and $11¼ to $11⅝.

Gum Benjamin—A little was done in Siam lately at prices not reported.

Fish Maws—Small lots picked up as they come forward, full prices have to be paid.

Nutmegs are in small supply; no purchases have transpired this week. Mace is also scarce and held for high prices; a little has been sold at $35.

Pepper—Black: The market opened a little stronger but closes weak at quotation. About 200 tons have been purchased, say 40 tons early in the week at $21¼ and 160 tons subsequently at declining rates from $21¼ to $21 05. White: Almost out of supply; nothing done for some time. Long: Out of season; nothing done lately.

Sago—Pearl: Very scarce and firmly held; 15 tons small grain taken at $3⅛. Flour: A large business has been done at full prices, say of Siak and Singapore kinds 375 tons at $2 15 for No. 2 and $2 30 to $2 45 for No. 1. Of Sarawak about 275 tons have been contracted for a $2 45.

Sticklac—Last purchases were at $9⅛.

Tapiocas are quieter, but a fair business has been done and prices are not quotably lower. Of flake about 60 tons are reported at $6 10@6¼ for medium and $6 05@6 10 for small, some fine fetching $6 75. Of pearl about 150 tons have changed hands at $5 95@6 32½ for medium and a little small at $6 45. Flour: 5 or 6 tons purchased at $5 60.

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" Bromide,
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CHEMICAL MARKET.

Note—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*

The prices current will be found on page 50.

TUESDAY EVENING, Jan. 17, 1888.

Heavy Chemicals.

There have been few signs of activity in the market for the heavy chemicals during the past week, and few features of special interest. The scarcity of carbonated soda ash coupled with a slight improvement in the demand for spot supplies, has caused a firmer feeling and prices are a shade higher. Caustic soda sympathizing with Liverpool advices, is easy and prices have again receded. In the other heavy goods about the same general features prevail as were noted last week. Messrs. J. P. Brunner & Co. write us from Liverpool under date of the 7th instant, as follows: "The market opened tamely this week, but has since improved and a good business has been done in some lines of heavy chemicals. Soda ash is well maintained, makers being well filled with orders for this month. There are not many fresh orders coming to hand, but full prices have to be paid for special brands. We quote spot prices: Caustic ash 48 per cent. 15-16@1d, high test 15-16@1d. Carb. ash 48 per cent 1@1 1-32d. high test 31-32@1d. Soda crystals are a shade easier at £2 10s@2 12s 6d, and sales are reported in this range. Sales have been made for the States for a month or two ahead, on private terms. Caustic soda—The low prices seem to have tempted buyers and a number of orders have been placed for 40 per cent. January delivery, at £4. At the close there are very few sellers at this figure, 2s 6d@5s advance being asked in some cases. Several makers are fully sold for this month; 60 per cent is in moderate compass and £6 2s 6d has been paid, although this price can be shaded for some makes. In 74 per cent we hear of sales of 50 tons at £7 10s, and 80 drums at £7 11s 3d, prompt delivery: We quote: Sixty per cent, £6 1s 3d@6 5s; 70 per cent, £7@7 5s; 74 per cent, £7 10s@7 12s 6d; 76 per cent. £8 5s@8 15s. Bleaching powder is quiet, but there is little offering. For America, £7 15s has been paid for one or two lots, and for one second-hand lot £7 13s 9d has been accepted. Several orders at £7 12s 6d have been refused. Chlorate of potash is rather better. On the spot, 6¼@6¼d are nearest values, while one maker reports business for March-December at the higher figure."

Carbonated soda ash, 48 per cent, of the various Liverpool brands is not obtainable on the spot for prompt delivery, and there is little offering to arrive nearby so far as we can learn. The demand is improving, but the inquiry is principally for small lots to supply pressing needs of consumers pending the arrival of goods contracted for some time since. For lots to arrive dealers ask 1 25c, and we hear of nothing that can be obtained at less. For high test there is some inquiry, but we hear of no sales or consequence, and prices at the close were somewhat nominal.

Caustic soda ash 48 per cent is very quiet the only inquiry being for small lots to meet some passing requirements of consumption. Prices however remain about steady and we repeat our quotations of 1 21¼@1 25c for lots to arrive and 1 30@1 35c for spot quantities according to holder and size of order. The stock here is limited and with more than an ordinary demand prices would no doubt advance.

Newcastle soda ash is in very small supply on the spot and with considerable inquiry for lots to fill immediate wants the market has stiffened up somewhat since the date of last writing. There is now nothing offering to arrive below 1 25c for 48 per cent while for the small quantities obtainable on the spot up to 1 35c has been paid. For high test there is a moderate jobbing demand which is met at 1 15@1 20c but large buyers could possibly do better.

Refined alkali 36 per cent shows no improvement, demand being almost entirely lacking while prices are unchanged and nominal. The quotations according to holder and quantity are 1 10@1 12½c but in a large way buyers could no doubt obtain stock at less. The troubles in the flint glass trade continue to exert a depressing influence on the market for 48 and 58 per cent and since we last wrote we have heard of very little business. The nominal quotation for the former is 1 20@1 25c while the latter is held at 1 15@1 20c.

Caustic soda is again a shade weaker, owing to the low quotations from Liverpool. Very little interest is shown by buyers, and prices are almost entirely nominal. For 60 per cent the quotation is 2 52½c, and 70 per cent is held at 2 32½c, though 2 30c and possibly less might be accepted by some holders. For 74 per cent 2 27½c is named, without attracting buyers.

English sal soda occupies about the same position as when we last wrote. Offerings on the spot are limited, and there is not much obtainable to arrive near by. The sales making command 1 05@1 25c on the spot, according to seller and quantity, while lots to arrive are held at 95@1c, according to position, quantity and seller.

Bleaching powder is somewhat inactive on the spot, and there seems to be little disposition on the part of consumers to do business on forward contracts. There is now a good stock here, but holders do not seem inclined to force business and prices are therefore fairly steady. We continue our former quotations of 1 87½@1 95c according to holder, quantity and position.

Acids.

The position of acetic acid is still favorable to buyers, the competition between manufacturers showing no signs of abatement. Consumers who are not already supplied on contract cannot be induced to take more than necessary for current use, and the market therefore has a slow appearance. The nominal quotations are 2¼@2½c, but we hear that the inside figure is shaded in some instances.

Oxalic acid is selling to a moderate extent in accordance with the present needs of consumers. The combination prices are maintained and we continue to quote 8c for lots of 10 tons or over for future delivery and 8½c for small quantities on the spot.

Sulphuric acid has been in very good request during the week and there are signs of a revival of interest among consumers. There is no pressure to sell and no disposition to shade the present low quotations. For large lots of 66 deg. 90@95c is asked, but for jobbing quantities $1@1 20 must be paid, according to seller and size of order. In chamber acid there is a fairly good business at full previous prices.

Miscellaneous.

Acetate of lime is without animation, and the weak feeling previously reported is still the most characteristic feature of the market. For gray the quotations are 2½@3 40c, and brown is to be had at 1 65@1 70c, as to quantity.

Arsenic remains dull with prices almost entirely nominal at 2½@2¾c to arrive, and 2¾@2¾c on the spot, according to quantity wanted.

Alum is still fairly active in a jobbing way with steady prices. Sales of 500 bbls are reported at 1 70@1 7½c for lump, 1½@2c for ground, and 2¼@2¾c for porous, as to size of order.

Blue vitriol continues in light supply and with a good demand the market is firm at 4¾@5¼c as to quality, quantity and seller.

Brimstone is now offered on the spot from recent arrivals at $35, but we have heard of no sales, this price appearing to be above the views of consumers. Reports from Sicily indicate an advancing market there and futures are held much more firmly. For best seconds to arrive, on the way, $21 50@23 according to position is asked and for future shipments $20 75@21 are the lowest figures we now hear named.

Nitrate of soda was easier early in the week, owing to the arrivals and the apparent lack of interest shown by the majority of buyers, but later the low figures named stimulated the demand and important sales were made, concentrating the stock, both spot and to arrive, in a few hands. The reported transactions amounted to about 15,000 bgs at 2@2 02½c ex-vessel and 2 05@2 10c from store, the market closing firmer at 2 10@2 12½c, as to quantity for spot goods.

Brown sugar of lead has been advanced, and the market is now controlled by a combination of manufacturers. Their quotations are 7½@8c. White has also been advanced and is now quoted at 13c in casks and 13½c in barrels, less the usual discounts.

Ammonias, Potashes and Fertilizing Chemicals.

The fertilizing trade is beginning to pick up. Southern manufacturers did not take advantage of the low prices last fall to provide for their spring requirements and are now trying to make up for it, but, except in a few instances, they have not as yet shown any great eagerness as buyers. There is a firm tone to the market and prices are maintained. We quote dried blood at $1 95 for red and $2 for black; azotine at $2, sulphate of ammonia at $3@3 05, bones at $17 50@21 for rough as to quality and $24 for ground, refuse bone black $17, tankage $19 for low and $21@21 50 for high grade, fish scrap $23 50@24 f o b factory, and Charleston rock at New York $7 for crude and $9 for ground.

Muriate of potash remains very firm. There is very little offering here, recent purchasers having about cleared the market. Since we last wrote there have been sales of about 250 tons spot and to arrive at former prices. We quote $1 77½ for goods on the spot and to arrive by steamer near by, and $1 72½ for future shipments by sail.

Double manure salt is higher, owing to the

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(ABSOLUTELY PURE.)
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extreme scarcity of available supplies. A sale of 100 tons was made at $1 10 to arrive, but there is now nothing to be had below $1 12½@1 15.

Kainit has attained more firmness through the Southern demand in the absence of available supplies of any extent, and $9 50@10 is asked for the small stock in Northern ports. Shipments afloat are not offered below $9@9 50 according to position, while January-February shipment is still obtainable at $8 25@8 50.

Philadelphia Chemical Market.

PHILADELPHIA, Jan 16, 1888.

Trade was extremely dull during last week, and as there were fair sized parcels of nearly all kinds of chemicals on the docks awaiting purchasers, the holders in many instances were offering at prices slightly under previous quotations. The inducements offered were not always sufficiently great to prove tempting, and as a result the stock in storehouses was decidedly increased during the last few days.

Carbonated soda ash Liverpool 48 per cent is in fair supply, but meeting with a very limited demand. Jobbing parcels for prompt delivery can be had at 1 30@1 40c as to brand, to arrive 1 2.½@1 35c are the ruling figures, with a possibility of a shade under being accepted on firm offer. Shipments are quoted at 1 25@1 32½c, but with little inquiry to note. In 58 per cent there is no demand to note, the strike among the glass trade has seriously curtailed the consumption. Prices last given still hold good, but in the absence of sales are merely nominal. Newcastle 48 per cent is in full supply, and from dock is quoted at 1 22½@1 30c. The same figures are named for shipments.

Caustic soda ash 48 per cent on spot can be had at 1 30@1 40c with a limited demand, confined to jobbing parcels, in progress. To arrive 1 27½@1 35c will buy, and shipments are obtainable at 1 22½@1 30c as to brand and quantity.

Caustic soda 60 per cent is dull at the moment. On spot prime brands are held at 2 60@2 70c; to arrive 2 57½@2 67½c are the ruling figures. Shipments are held at 2 55@2 62½c, but buyers are showing a disposition to postpone placing their orders to as late a day as possible. Seventy per cent is only moving in a small way for immediate wants and can be obtained on spot at 2 47½@2 55c. To arrive holders are naming 2 45@2 52½c, but on firm offer it is probable that business could be done at lower figurer. Shipments are held at 2 40@2 45c, with a strong inclination shown by holders to sell at lower figures rather than miss the opportunity of placing a good sized parcel. Nothing new is to report concerning 74 per cent. and 76 per cent The weakness exhibited for some time past in these tests continues: this is more especially the case with goods for forward deliveries.

Sal soda has shown a great amount of weakness since the arrival of a week ago of large sized parcels yet to dispose of. Early in the week no trouble whatever was experienced in securing jobbing lots from dock at 90@90c, and it is said that even lower figures more in some instances be accepted rather than miss sales. Owing to the lots being either sold or put into store, there is nothing to be had at under 95@1 02½c as to quantity.

Refined alkali 36 per cent is held on spot at 1 15@1 25c: deliveries were made, however, at figures considerably under the above. Solvay 36 per cent can be had on spot at 1 25@1 35c; forward deliveries are quoted at 1 15@1 25c. B M 48 per cent has arrived freely but nearly all went into consumption on contracts. Spot goods are bringing 1 25@1 32½c. To arrive and for shipments we quote 1 22½@1 30c. B M 58 per cent is dull at the moment, the labor troubles having an appreciable effect on the demand. Stocks, however, are light and spot goods are firmly held at 1 22½@1 30c. To arrive 1 20@1 27½c is named and same figures apply to shipments.

Bleaching powders are lower than at last report, owing to offerings of Newcastle goods at 1 92½c@$2. Liverpool brands on spot and to arrive are quoted at $2@2 20; there is, however, a lack of buyers noticed. Nitrate of soda from store is held at $2 25@2 40, but with few orders reported and those being for small lots.

Spurious Mace.

Professor Hanausek reports the occurrence in Germany of a spurious variety of mace. It is described as being purple brown in color, rather more than two inches long and rather narrow in proportion to its length, it being apparently the mantle taken from a seed of oblong form. At first it was thought to consist of the arillus of Myristica fatua, Houtt., but this was inconsistent with the total absence of odor or taste from the drug. Similarly, M. officinalis, Mart., and M. sylvestris, Houtt., had to be excluded, and the spurious mace was considered to present the greatest resemblance to the Bombay mace described by Tschirch, which is derived from Myristica malabarica, Lamk. Dymock says that the arillus from the seed of this plant is of a dark brown red color, and has adherent to it on the inside a thin papery membrane of a light brown color. He quotes Tschirch as saying that the epidermal cells of the arillus are radially elongated and twice as high as those of true mace, which are tangentially elongated. Their walls show the cellulose reaction with iodine and sulphuric acid, and with chloride of zinc and iodine swell and turn faintly blue. The oil cells are very numerous, located near the epidermis on both sides, often close together in groups of two or three, oval in shape, somewhat radially elongated, and contain a dark yellow usually resinified oil and frequently also a brownish resin.

Natural Gas.

BY DAVID SWING.

Among the theories regarding the fact, quality and quantity of natural gas, there is not a little merit in the idea that the contraction of the earth has made millions and billions of cubic feet of some kind of inflammable air occupy a small space at last and therefore anxious to get free. Some think that what is natural gas is a solid and becomes a gas as soon as the pressure is removed by the sinking of a shaft; that then a cubic foot of this kind of dynamite makes a million cubic feet at the surface of the earth. This is the theory which seems not a little probable.

The earth was probably ten miles, or it may be a hundred or a thousand miles, larger in diameter than it now is, and settling as it cooled, it subjected its contents to that pressure which could make a coal-bed or the volcanic rock. Our mountains may not have been lifted up, they may be the parts of the earth which did not sink down. The penomenon of bent strata would be the same in either event. Volcanic mountains may have made the valleys sink as rapidly as they built themselves upward.

It is certain that none of the contents of the globe are now being manufactured. The gold, silver, iron, coal, lead, stone, diamonds, and even the tons of amber were made before the reign of man began. The earth has in its day been an amazing shop. The articles manufactured were wonderful in variety and quantity. Without any actual Vulcan to superintend it, it turned out more stuff than all the railway trains upon the surface could handle in many thousands of years. But this wonderful shop was closed before man began to exist, and what man now finds is only the work that was left in the shop when it closed up. The coal we find is, perhaps, only some that was left after the work of making gold, silver and diamonds had been finished. The amber may be a remnant left by those forests which the coal-makers did not need.

Looking upon the interior of the earth as a closed shop, one may well conclude that this natural gas was among the articles made when the machinery was all running, before the mastadon yet lived in the high grass and before the mammoth bats flew forth at sunset to catch enormous bugs. How large a stock of this gas was thus left on hand when the mills shut down is not known. There is nothing to judge from, because all is invisible and immeasureable below the surface. The deposit of this substance, as recently discovered, reaches from the middle of Pennsylvania to the middle of Indiana, and may, perhaps, extend a hundred miles north and south. Of the earth's surface this is a small part, but it is a large part compared with that occupied by deposits of diamonds, silver and gold. How thick the deposit of natural gas may be cannot be so well learned as the horizontal dimensions. Little, therefore, is known as to the quantity on hand for human use.

The pressure of the Ohio and Indiana wells is about 380 pounds to the square inch. The one at Kokomo, Ind., a half dozen or more, do not differ in the least in power. The least and the greatest wells all reveal one pressure when closed and when the full power is thrown upon the gauge. The more rapid delivery of one well over another comes from the want of obstructions in the pipe and at the bottom, but when any well is closed the gas shows the one power that is common to all

or has any Kokomo well yet declined any in pressure; but a year or two is a very brief period in nature. The question of decline must be left to the future, at least to a little more of the future than a half score of years represents There is almost no probability that the supply of this fuel is in exhaustible, as is that of coal or stone; but the supply may be great enough to warrant the investment of capital, because this outlay would be repaid in fifteen or twenty years.

The affair is wonderful at present. In the Indiana towns where this gas is flowing, the people are now enjoying a mid-winter summer-time. The whole house is so easily warmed that if a family desires a June temperature from kitchen to attic it comes at the touch of a child. When the cold wave rolls down upon Kokomo, or Portland or Findlay, the wife or daughter or the small boy lets on more fuel by turning the valve, and the whole house suits itself to the weather, while zero loses its significance.—*Chicago Journal.*

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Registered. Registered.

Preparation of Dragon's Blood.

Dragon's blood is the product of the province of Djambi, in Sumatra, and, to a slight extent, of parts of the west coast of the Malay peninsula, north of province of Wellesley. The article comes into the market prepared and put up in two different ways, viz., in cakes or lumps about 1½ inches thick, or in small tablets or sticks about 8 to 9 inches long, both tablets and sticks being well packed into palm leaves, to prevent it from running by the action of heat. It varies in price from $20 to $50 per picul, all depending on the purity of the article, since adulteration is resorted to, such as mixing brick dust or other foreign matter with the extract while still warm, before being poured into moulds. I have before me four samples, $20, $25, $40 and $50 per picul, respectively, says a British consul. The first is cake, and nearly as heavy as its volume in brick. By scraping it, it feels gritty, and the scrapings, when mixed with water and daubed over paper, give an uncertain dirty crimson color, while it should be a good crimson, with a light subtint of purple. No. 2, looking like a thin plug of tobacco (about 1½ by 7 inches), and wrapped into palm leaf, is purer, more solid, but not free from adulteration. No. 3 looks like a thin, long stick of licorice, and has a palm-leaf wrapper over all, with both ends closely tied and thread wrapped over all the entire length. It is very solid, and said to be a special preparation by grinding up the extract with a little oil, which, it would seem, tends to give solidity when dry. Adulteration in this preparation would seem to me almost impossible, since by breaking a stick in two and holding a broken end to the light any admixture of any substance in the least rough and not exactly the same color as the true extract would show itself. No. 4 (at $50) is in cake and looks different from all the rest. It comes from the Malay peninsula. In color when broken it looks like dry blood, with a purplish subtint. In rubbing it it feels as smooth as wax, and its volume is much lighter than No. 1, at $20; it is no doubt pure and genuine.

Manufacture of Fuchsine.

(Continued from page 11, Jan. 11th.)

CRYSTALLIZING THE FUCHSINE.

The preparation of the commercial fuchsine from the crude fuchsine, requires a system of apparatus similar to that used in treating the melt. The crude fuchsine is boiled in a boiler under a low pressure, and the solution is filtered through a pressure filter and run into a series of crystallizing tanks. The crude fuchsine, as it is taken from the crystallizing tanks, contains in addition to the fuchsine some phosphine and mauvaniline, also small quantities of violanfline and humus-like compounds. When an excess of aniline was used in the preparation of the melt, it may also contain small quantities of phenylated products. The coloring matter are in the first place separated into two parts, one soluble in dilute soda solution and the other insoluble. The boiling of the crude fuchsine, as has already been stated, is effected in a boiler (fine boiler), which is constructed exactly like the melt boiler. If the crude fuchsine is dissolved in boiling water and the solution treated with sodium carbonate, a decomposition will take place between the salts of mauvaniline an violaniline, carbon dioxide will escape and the free bases will separate, while the fuchsine together with the phosphine will remain in solution and may be separated from the insoluble residue by filtration.

This residue, which consists principally of mauvaniline and violaniline, together with some chrysaniline and rosaniline, after being freed from the two latter, gives the material used for the preparation of marron. The hot filtrate, after being neutralized or slightly acidified with hydrochloride acid, and mixed with the requisite quantity of salt, just sufficient for separating all the fuchsine, will separate the greater part of the fuchsine in crystals. Very little fuchsine, and all phosphine remain in solution. The mother liquor separated from the fuchsine is used for boiling the crude cerise. In the crystallization, we have formed on the floating cover, and sides of the tanks, perfectly developed octohedral crystals. The crystals which separate on the bottom of the tanks, are not so fine in appearance, although equal in quality. They are therefore employed in the preparation of rosaniline by boiling the dried crystals with a solution of sodium carbonate and precipitating the solution with sodium hydroxide. The solution separated from the rosaniline on cooling, the so called "base" solution, which in addition to the salt and sodium carbonate still contains rosaniline, is used instead of water, for recrystallizing the crude fuchsine. As this base solution contains but little sodium hydroxide in excess, which is neutralized by adding to the always acid crude fuchsine, the rosaniline mother liquor is very advantageously used for the recrystallization of the crude fuchsine. This solution should therefore always be used for recrystallizing the fuchsine, and water should only be employed, when there is none of this solution at hand. In the latter case, the boiler is filled with 2,500 liters water, the quantity necessary for the recrystallization. The water is then heated to boiling by direct steam, and the stirrer is set in motion. The steam is then run in more slowly so as not to prevent working at the manhole. To the boiling water, the crude fuchsine obtained from one melt, as it is taken out of the recrystallizing tanks, is added as quickly as possible.

Instead of the crude fuchsine from one melt, the proportionate quantity of crude fuchsine from some other source, such as is obtained in the treatment of the crude cerise and the so-called crystal residue, may be employed.

After the crude fuchsine has been placed in the boiler, it is at first boiled for one hour under the ordinary atmospheric pressure. All the coloring matter which is soluble in water has then been dissolved. Then 10 kilos of sodium carbonate are added with continued stirring. The quantity of sodium carbonate, which is equivalent to the quantity of coloring matter, must be gradually added at first, on account of the effervescence which it produces. After the ingredients are mixed, the boiler is closed and the mass is heated for about 1½ hours to 0·5 atmospheres. At the end of this time the stirrer is stopped, and the pressure in the boiler is reduced to 0·3 atmospheres, after which the steam is blown off. The syphon tube is then inserted and connected with the pressure filter, after which the contents of the boiler are forced through the filter and run into the crystallizing tank. When about one-third of the contents of the boiler have been run into the tank, 18 kilos hydrochloric acid are stirred into the latter and the stirring is continued until the whole of the filtrate is in the tank. To the hot and concentrated, slightly acid solution of rosaniline hydrochloride, is added twenty-five kilos salt under constant stirring, and the solution is covered with a floating cover. This floating cover, consisting of eight cut boards, is arranged in such a manner that the surface is covered to within 2 cm. of the circumference. The crystallization takes place during the night and the two following days. During this time the greater part of the crystals separates on the sides and cover of the tank, while another portion separates on the bottom. In order to have the least possible separation on the bottom, the crystallizing tanks are made quite high, i. e., about as high as broad. On cooling, a very fine product is obtained on the cover and sides. The crystals on the bottom are but little less pure, though not so fine in appearance. After all fuchsine has crystallized out, and the tank has acquired the temperature of the room, the floating cover is removed and the boards are set upright into a trough to drain.

The mother liquor from the crystallization is then transferred to the cerise boiler, to be converted into cerise. After the mother liquor has been removed from the tank, the crystals on the bottom are first removed. For this purpose a workman enters the tank, breaks off the crystalline crust, scrapes it together, and places it on zinc trays. Having thoroughly cleansed the bottom, the crystals on the sides are carefully scraped down upon the clean bottom, and also spread upon separate zinc trays. The crystals on the cover are also separately dried. The clean tank is then ready for the next solution. The fuchsine crystals, which, according the place of their formation on the cover, sides, or bottom, are known as Diamond Fuchsine or Fuchsine OO, Fuchsine O, and Fuchsine B, are placed into a drying chamber, heated with hot air; where spread upon the zinc trays they are exposed to a temperature of 50 to 60 deg. C. for 2 to 3 days to dry.

On an average the yield of fuchsine OO is 12 kilo, fuchsine O 35 kilo., and fuchsine B 16 kilo. The first two sorts are the commercial article, the third is treated for rosaniline. The size of the crystals obtained, like in all similar cases, depends upon the slow separation. Large crystals are always demanded when the fuchsine is to be exported to China or East India. The European and American consumer cares little about this external character. The slow separation of the crystals depends upon the concentration of the solution, and upon the quantity of salt added. The location of the crystalling tanks and the thickness of the wood of which they are constructed also exert a considerable influence upon the formation of the crystals. In order to obtain large crystals the sides of the tank should be thick, and it should be set up in a place where it will not be exposed to shocks.

With a capacity of 3,000 liters when diameter and height are approximately equal a thickness of 3·5 cm. will be sufficient. Under the above conditions the formation of fine crystals will take place.

B. PREPARATION OF THE ROSANILINE BASE.

HISTORICAL.

Rosaniline was first prepared in a pure state and its properties studied by A. W. Hofmann in 1862. The color industry utilized Hofmann's observations and based a method for the extraction of fuchsine upon the solubility of rosaniline in alkalies, a property which it appears was first noticed by Monnet & Dury in 1861. This method of obtaining rosaniline, which was first practised in a number of works and known as the basic process, was described by Hofmann, Girard and De Laire in 1867, and again by Girard and De Laire in 1873. According to this method the pulvericed red melt is boiled in water and after the fuchsine is completely dissolved, the solution is mixed with an excess of milk of lime. Any free aniline contained in the melt is then distilled off by steam, the whole left at rest to settle, decanted through a filter and allowed to cool. On cooling, crystals of crude rosaniline of a brick-red color separate from the filtrate. The mother liquor is again pumped into the boiler and used for another extraction of the melt, after having previously added the calculated quantity of milk of lime necessary for dissolving the rosaniline. In this way, according to Girard and de Laire, the same mother liquor can be used for a long time. By treating the melt in this way, the rosaniline is extracted by the action of the alkali, and separated from the solution on cooling. The extracted rosaniline is purified by alcohol. This dissolves only the rosaniline, and leaves the impurities which are present in small quantity and consist principally of mauvaniline and chrysaniline undissolved. One part of the crude base is dissolved in 2 parts alcohol, and filtered directly into a still. The alcohol is recovered by distillation, and the base remains in a pure state.

The extraction of rosaniline by lime-water has great disadvantages. The boiling of the conglomerate, consisting of the color bases, and calcium arsenite and arsenate, was a very troublesome and difficult operation. The whole operation required much time, on account of the comparatively slight solubility of of the rosaniline in lime-water, which is still further diminished by the ready solubility of the calcium arsenite in water. Attempts were made to overcome these defects by mixing the boiled melt with just sufficient lime to precipitate the coloring matters. These were separated from the arsenate and arsenite and dissolved in hydrochloric acid. The solution was then treated with milk of lime in a closed boiler under pressure. In this way, especially when baryta was used in place of lime, a much better yield was obtained. Nevertheless, this method could not compete with the other method of red melt extraction, and had to be given up as a method of extracting fuchsine.

But as the fuchsine, as it was obtained at that time by simple recrystallization, was sufficiently pure for dyeing, although not pure enough for use in the manufacture of coloring matters, and the pure base was necessary for the preparation of certain rosaniline derivatives, the old method was not given up altogether, but was modified in such manner that fuchsine crystals were used instead of the melt, the method of extraction remaining the same. By so doing, the base was obtained of sufficient purity.

According to Girard and de Laire the fuchsine is dissolved in the requisite quantity of water, mixed with an excess of alkali in the form of soda, lime, baryta or ammonia, and the mixture heated in a closed boiler, under a pressure of 2-3 atmospheres for 4-5 hours. On cooling rosaniline crystallizes from the filtrate, it is filtered, washed with water, and dried.

At present rosaniline is obtained by precipitating a solution of pure fuchsine, with soda lye. The fuchsine is dissolved in a definite quantity of water, and the black solution is mixed with an equivalent quantity of sodium carbonate. The resinous mass, consisting of chrysaniline and mauvaline, which separates is removed with a skimmer, and the clear alkaline fuchsine solution is decomposed with sodium hydroxide. The characteristic part of this method is, in addition to the manner of purifying the fuchsine, the fact, that the method is not an independent operation, but constitutes a part of fuchsine manufacture, because the mother liquors, which contain rosaniline, are always employed in the crystallization of the crude fuchsine, for the preparation of fuchsine crystals.

MANUFACTURE OF ROSANILINE.

As has already been stated, the imperfectly formed fuchsine crystals fuchsine B are used for the preparation of rosaniline. They are dissolved in water in a boiler constructed similar to the one used in dissolving the fuchsine melt, purified with sodium carbonate, and filtered through a pressure filter. The purified filtrate is run into a so-called "base precipitator," an iron kettle holding about 3,000 liters and provided with a stirring apparatus. In this kettle the rosaniline is precipitated with sodium hydroxide, by running the fuchsine solution in a thin stream into the soda solution, which is kept continually in motion by the stirrer. The hot solution is run into a wooden tank in which the greater part of the rosaniline separates on cooling. The rosaniline is separated from the liquor by filtering through a six chambered filter press. The alkaline solution, which still contains rosaniline, is either run into a reservoir or into the fine boiler, if fuchsine is just being crystallized.

When rosaniline is to be prepared, 3,000 liters of water are run into the boiler and heated to boiling by direct steam. Then the stirrer is set in motion and 44 kilos fuchsine are thrown in, in about 20 minutes. The fuchsine dissolves in the water, and is then purified by the addition of 4 kilos sodium carbonate, during 15 minutes; that is, it is freed from the coloring matters, which are insoluble in a dilute solution of sodium carbonate, traces of mauvaniline and chrysaniline, which separate as a resinous mass. After the sodium carbonate has been added, the boiling is continued 10 minutes longer and then the stirring is discontinued and the steam shut off. In the meantime 5 kilos solid sodium hydroxide have been dissolved in the base precipitator, in 100 liters hot water. The fuchsine solution is then forced by steam pressure through a pressure filter into the base precipitator, the stirrer of which is kept in continual motion. The red solution is decolorized, and a pale red powder separated. After the filtering and mixing are completed, the solution is run into a wooden tank and allowed to cool for 2 to 3 days. To obtain the rosaniline the stirred up contents of the tank are run into a montejus. The rosaniline which has crystallized out on the bottom and sides of the tank is swept off with a broom and washed out with fresh water. Is is filtered through a filter press, lined with strong cotton cloth, and the filtrate is run into a reservoir. After blowing out the press cake with air, fresh water is forced through by air pressure to wash the rosaniline. As soon as the wash waters running from the press show only a faint alkaline reaction the washing is discontinued, and the press cake is blown dry with air. The cakes removed from the filter press are spread on zinc trays, and the rosaniline is dried at 50 to 60 deg. C. in well ventilated drying chamber.

C. PREPARATION OF FUCHSINE WITH BASE SOLUTION.

In the manufacture of rosaniline there is obtained, in addition to the wash waters, the rosaniline mother liquor, which can be utilized. The former are waste; the latter is advantageously used for recrystallizing the crude fuchsine. The crude fuchsine is dissolved in the mother liquor, and to the solution is added only 6 kilo sodium carbonate, because the liquor from the fuchsine purification already contains 4 kilo. After adding the sodium carbonate the boiler is closed, and the solution is heated for 2½ hours, at 0·5 atmospheres pressure. Then the steam is blown off, and the solution is filtered. Into the filtrate is stirred first 20 kilo hydrochloric acid, and then 25 kilo salt, and the operation is completed as described above.

The residue remaining in the boiler is converted into maroon, with crude cerise and crude fuchsine as by-products, in the manner described below. It consists of violaniline, mauvaniline, rosaniline and chrysaniline and some brown coloring matters.

2. MANUFACTURE OF CERISE.

Cerise is the name commercially applied to mixtures of coloring matters, which in addition to fuchsine-like coloring matters also contain phosphines. When the fuchsines predominate the product is commercially known as cerise RR, in the opposite case as cerise R.

HISTORICAL.

The products known as cerise it appears were first introduced by R. Knosp in Stuttgart, and J. R. Geigy in 1866. Nothing was known about cerise for a long time, until in 1874 E. Kopp wade some statements regarding this manufacture. According to him the cerise is made by precipitating the crude cerise mother liquors with sodium carbonate. According to Wurtz (1876) the mixture of coloring matters thus obtained is purified by redissolving in water, precipitating with salt, filtering and drying. P. Schoop (1885) also briefly mentions the preparation of cerise.

In working up the crude cerise the attempt is made to remove from the mixture of coloring matters a definite quantity of fuchsine, so that a mixture will remain which on dyeing will give a shade corresponding to cerise RR or cerise R. The separation of fuchsine from the crude cerise is effected in the same manner as the separation of crude fuchsine from the melt. The crude cerise is simply dissolved in water containing hydrochloric acid, and to the filtered solution is added as much salt as is approximately necessary to precipitate sufficient fuchsine to leave a mother liquor which will correspond to a type shade. The crude fuchsine which separates is subsequently treated for fuchsine and rosaniline. The coloring matter which is precipitated from the mother liquor with sodium carbonate consists of a mixture of rosaniline and chrysaniline with other coloring matters, the nature of which has not yet been determined. It is either treated for cerise R R by evaporating it with as much hydrochloric acid as is necessary to dissolve it, or it is treated for cerise R by removing still more fuchsine from the coloring matter in the above-described manner, and treating the residue as described for cerise R R.

A. PREPARATION OF CERISE R.

For the preparation of this coloring matter, the mother liquor from the crystallization of fuchsine is forced into the cerise boiler (constructed like the other boilers) and if its volume is not sufficient water is added to make up 2,500 liters. It is then heated to boiling and the crude cerise from 3 melts is added. After adding 40 kilos hydrochloric acid, the boiler is closed, and the pressure is raised 1 atmosphere for 1 hour by heating. At the end of this time the pressure is reduced, the steam is blown off and the settled solution is filtered.

To the hot filtrate is added 10 kilo hydrochloric acid and 20 kilo salt in an iron tank. On cooling, the fuchsine separates and adheres to the sides of the trough. The fuchsine is not allowed to separate completely, moreover the loss of fuchsine from the solution is controlled by dye tests. The object of this control is to strike the point at which the mother liquor, gives a shade, corresponding with a type. When this is reached, the mother liquor is immediately run off into another iron tank, to prevent a further separation of fuchine. The crude fuchsine remaining in the tank, is treated as above described, when a sufficient quantity has been collected to correspond to a melt.

The mother liquor from the crude fuchsine, which is generally still luke warm, is heated to 40 deg, C. with steam, and completely precipitated with 20 kilo sodium carbonate. The separated coloring matter is skimmed off.

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DYE MARKET

Note—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*

The prices current will be found on page 50.

TUESDAY EVENING Jan. 17, 1888.

The market for dyes and dyestuffs shows no material change from last week; there has been a scarcity of large transactions, the bulk of the business being on the jobbing order entirely.

Albumen—There has been some demand for stock, and a few new sales, but no transactions of any magnitude are noticeable. There has been nothing to affect values either one way or the other. Domestic continues at 15½@16c., while the same range is quoted for foreign. Egg continue firm, with no special demand existing, while values are still quoted at 60@65c.

Aniline colors have been the recipient of a steady jobbing demand, with no special features noticeable. The quotations of a week ago continue to rule.

Alizarine has been selling to a moderate extent, all inquiries being for jobbing parcels. The quotations continue at 18c for ordinary lots, and 19c for smaller parcels; sales are, however, being consummated at lower figures.

Bichromate of Potash—The position of the market is unchanged, with a moderate business doing in a jobbing way at the following unchanged figures: 10½c on orders for 5 casks, while for smaller lots a higher price would be asked. Bichromate of soda is unchanged from last week. The market has continued moderately active, while prices of a week ago continue to rule, 8½c being quoted for 5 cask orders, with a corresponding advance on orders for small parcels.

Cochineal—There has been but little business doing in this article during the past week, and stocks have continued neglected. The following are the unchanged quotations: Teneriffe silver 30c, black 33c, gray black 33c.

Cutch—There have been a few jobbing transactions during the interval, but this has constituted the business. Reports from Calcutta quote the market as easier, but in the absence of any business here, the market cannot be definately located. Diamond S M continues to be quoted at 7½@7¾c.

Divi Divi—There have been some transactions since our last report, sales of 200 bags being noted at $65. Sales of 500 bags to arrive are also reported. There have been no features to the trading and the market is in about the same position as reported in our last issue.

Dyewoods have met with a steady sale, and no complaint is heard as to the volume of business, for this time of the year. The transactions have been consummated at old figures, which are as follows: Hayti logwood from the north side $30, from the south side $25, and Laguna logwood at $35. The market for Mexican fustic continues firm with the quotations at $23. Dyewood extracts have been fairly active, with nothing out of the ordinary noticeable, Our former quotations rule, the following figures being quoted: Liquid 51 deg. logwood at 5½@6½c for domestic and 6½@9½c for imported; 42 deg. 5½@5½c; fustic at 8@9½c for 51 deg. and 8½@9c for 42 deg Solid logwood is held at 8½@9c, and solid fustic at 10¼@11¼c. Sumac extract is quotable at 4@10c for liquid 51 deg. and 8c for solid; hypernic at 15@16c for 51 deg and 20@24c for solid.

Gambier—Notwithstanding the fact that the supplies at this port are heavy, the market has shown no special signs of weakness; that is to say, nothing beyond what we reported in our previous issue. The market for shipment is rather strong, with sales reported as follows: 500 bales from vessels in port at prices in the neighborhood of 5c, also sales of 250 bales to arrive, at about the same figures. The store quotations are merely nominal, while no attention is paid to the limited stock in that quarter.

Indigo.—There has been very little of interest noticeable in the market for this article. The transactions have been somewhat limited, while the following are the unchanged quotations: 90c@$1 for low grade Bengal, $1 10@1 25 for medium, and $1 25@1 40 for fine. Madras remains quiet at 36@55c.

Nutgalls.—There has been no change in the position of the market for China galls. No business, outside of a few jobbing transactions, is reported, the same being impossible in the face of the fact that there are no available supplies except in dealers hands. The ruling quotation is still 17c. On aleppos, the situation is practically unchanged; supplies may be obtained at 14c, but there is very little demand and but little interest is taken in stocks.

Prussiate of Potash—Yellow is precisely in the same position as reported last week. Stocks have been in but limited request, with small sales of a jobbing character report at quotations, which are 19c. Red has continued to rule quiet, with 42c as the price quoted.

Sumac—There is no change in the market for Sicily, and only a few transactions have been made in goods to arrive, at prices within the range of former quotations as follows: $60@63 according to quality. Jobbing sales in spot goods to the extent of some 50 bags, are reported at old figures, with the market continuing quiet. There has been but limited trading in Virginia, with sales of, say, 70 bags reported at former quotations.

Tin Crystals—There is an active demand for crystals, and manufacturers have been running to their full capacity. The ruling figure continues high, tin being worth 37½c to-day. Crystals continue to be quoted at 26c.

Rhodamine.

E. WEINGAERTNER.

This new dye stuff is a dark reddish brown powder, which is very readily soluble in water, alcohol and acetic acid, and gives a fine blueish red solution. In the last two solvents it shows a particularly fine vermilion red fluorescence. It is a basic dyestuff and dyes cotton mordanted with tannic acid a beautiful blueish red. It does not dye vegetable fiber mordanted with alumina or iron. The present commercial product is the hydrochloride of the base, and is diluted with sugar. The base is readily soluble in ether, giving a colorless solution, which on evaporation leaves an intensely red mass having a metallic luster. With chloroform it gives an almost colorless solution, which unlike the etherial solution shows a strong greenish yellow fluorescence. The base itself is precipitated from a concentrated aqueous solution, only upon the addition of a concentrated solution of sodium hydroxide, in the form of reddish brown flocks. Dilute solution of sodium hydroxide gives no precipitate and produces but little change in the color of the solution.

The coloring matter appears to be the first member of a new group of coloring matters, for it cannot be introduced into any of the series of known basic coloring matters. On account of the basic character and known fluorescence it might at first sight appear to be a saffranine, but the saffranines dissolve in concentrated sulphuric acid with a green color, which passes on dilution through blue and violet into the original color. The new coloring matter dissolves in concentrated sulphuric acid with a brownish yellow color, which on dilution passes through orange and ponceau into its original bluish red color, This property of dissolving in concentrated sulphuric acid with a yellow color it has in common with the unsulphonated triphenylmethane derivatives. The fluorescence of the alcoholic or acetic acid solution, disappears almost entirely on heating and reappears on cooling. If, for example, the upper part of a filled test tube is heated the fluorescence will disappear in the heated portion while it continues in the cold end of the tube. The saffranines also give fluorescent solutions in alcohol but there is no apparent change on heating.

With acetic acid and zinc, or better with hydrochloric acid and zinc, reduction to a leucobase is effected. If after neutralization by means of sodium acetate, a few drops of the colorless solution are placed upon a piece of filter paper and rapidly dried over a flame, the original color reappears on the paper. With tannin reagent (tannic acid and sodium acetate) the coloring matter can be completely precipitated from its aqueous solution. On strongly heating, the substance melts and is decomposed with the formation of red vapor. The ash consisted of a small quantity of iron, probably derived from the process of manufacture.

Gas Tar and Its Uses.

Besides the manufacture of varnishes, gas tar is largely used in the manufacture of roofing felt. The best factories, however, partially distill the tar, collecting the more valuable products, but there is no reason why, when tar is cheap enough, it should not be used in its virgin state. The felt is passed through the hot tar and the excess squeezed out by rollers, which also causes the tar to permeate the interior of the felt. Tarpaulin and packing cloth is generally made with wood tar, but in some instances gas tar has been substituted, but with no apparent advantage, as the latent coloring matters of the tar have sooner or later caused damage. The vapors from a tar distillery are well known to cause paper, cloth and other textile materials to take a rosy hue, chiefly due, we suppose, to the volatile bases present, while pine wood in its new condition is deeply stained a deep yellow. When once formed, these colors are very permanent, and care should be taken that coal tar is not used where it is likely to do damage.

Roofing felt is very largely used in chemical works, but it requires retarring every spring and autumn to keep it in good order.

Lampblack is, in some districts, made by burning tar or creosote oil, though in most cases it is made from pitch, and with the extremely low price of this article, we fear gas tar is not able to compete; still in small works, where gas tar is such a drug that no one will take it away, it is open to the gas manager to to turn it into an article which can not only be sold at a distance, but which is certainly more easy of transport.

We have been informed that gas tar may be employed for use in the "lucigen" and "luminator" lights with as much ease and safety as creosote. If this be so, there is another outlet for tar which up to the present has been neglected. We fear, however, that warm tar would have to be employed, as cold gas tar does not find its way very regularly through small apertures. There are now many—very many—of these lights in existence, and it would be a very easy matter to get a trial made with tar in one of them.

We have not yet attempted to treat of the disposal of tar by distillation, but before we close the present chapter we would fain say a few words upon the system of carburetting the air with tar which is used in Hawkin's process of revivifying spent oxide in situ.

If every gas works were to use Hawkin's process there would soon be a scarcity of benzol, and a consequent increase in price, as the highest and most valuable naphtha would be removed from the tar for sale. The operation of carburetting the gas consists in taking up benzol and toluol vapors from the tar; but it has been found by direct experiment that the vapors existing in ordinary 17 candle coal gas consist of practically 90 per cent benzol, Now the crude naphtha from coal tar generallly contains about 25 per cent of 90 per cent benzol and 25 per cent of 50's with some solvent naphtha, and it is only the 90 per cent benzol which can be safely used for carburetting. Enough tar should therefore be passed through the apparatus to insure that only the lighter portions are extracted, otherwise the other heavy hydrocarbons are sure to be deposited somewhere and be lost. The question of satisfactory carbonization is much more intricate than appears at first sight, and, no doubt, many of the failures we hear of arise from the subject being treated entirely from a mechanical instead of a chemical point of view. The naphtha of the tar having been abstracted by the air current, the residue will not, of course, be so suitable for distillation as before treatment, though all the less volatile constituents will remain unaffected, such as solvent naphtha, creosote, carbolic acid, and anthracene. We have heard it affirmed that the tar after treatment by Hawkins process, is not depreciated in any appreciable degree, but to those who argue thus, we say that there is neither sense nor reason in their argument, which is not entertained for one moment by anyone who has the slightest chemical knowledge whatever.—*Chem Trade Jour.*

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No. 250,247.

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